My Life as an Epic Win: Self-Determination in Individuals with High Functioning Autism Spectrum Disorder

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Abstract

The transition into adulthood can be a difficult time for any young person. For individuals with Autism Spectrum Disorder who have challenges in communication, social interactions and executive functioning (DSM 5, 2013), this transition could be extremely difficult. Research has shown that higher rates of self-determination in teens with and without disabilities are associated with many positive outcomes in adulthood (Cobb et al., 2009; Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015; Wehmeyer et al., 2010). For young adults with HFASD, there is little evidence for the effectiveness of teaching self-determination on their adult outcomes (Wehmeyer et al., 2010; Shogren et al., 2015). To address this concern, in the winter of 2014, a ten-week course called *My Life as an Epic Win,* designed to teach self-determined behaviours, was delivered was delivered to eight older teens and young adults with HFASD and their parents. This MA thesis used a comparative case study design involving descriptive, interpretive analysis to describe the engagement of three of these participants with protocols relating to self-determination. Specifically, qualitative within and across participant analyses of pre- and post-course measures of self-determination were used to explore the impact of the course on self-determination for three of the eight young adults. Two measures of self-determination were used (a) the Arc's Self-Determination Scale (SDS; Wehmeyer & Kelchner, 1995), and (b) Visioning and Action Questionnaire (VAQ). Analyses of these three case studies were useful in three ways. First, analyses showed how these individuals with high functioning ASD already demonstrated certain aspects of self-determination prior to the course. Secondly, the analyses provided insight into how self-determined behaviours were enhanced through training for these participants. Finally, the positive

trends that were seen encourage us to continue developing and evaluating future iterations of the *Epic Win* course. Separate from the case study analysis, procedural analysis provided guidance as to how the course could be improved to enhance future participants' acquisition of self-determined behaviours and to effectively evaluate this skill acquisition.

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CHAPTER 1

My Life as an Epic Win: Self-Determination in Individuals with High Functioning Autism Spectrum Disorder

The transition into adulthood can be an enjoyable time for some youth, and a highly challenging experience for others. Ideally, this transition refers to the time period when an individual is completing high school, participating in post secondary education, gaining employment, becoming involved in the community, contributing to a household and experiencing successful relationships (Wehman, 2006). More often than not, this transition to adulthood can be particularly difficult for young adults with Autism Spectrum Disorders as these individuals face significant obstacles (Hendricks & Wehman, 2009).

Individuals with high functioning (HF) Autism Spectrum Disorders (ASD), including those with Asperger's Disorder (hereafter, collectively referred to as HFASD) have deficits in communication, social interactions and executive functioning despite overall cognitive functioning in the average range (IQs above 85; DSM 5, 2013). In addition, people with HFASD may have rigidity and sensory challenges (e.g., highly dependent on rigid routines or overly sensitive to changes in the environment). Given these social, communication, and sensory differences, the challenges experienced throughout childhood persist into adolescence and can become heightened in the transition from high-school to adulthood, impacting on acquisition of skills needed for higher education and employability.

Shattuck and colleagues (2012), in a review of the prevalence of post-secondary education and employment rates amongst young adults with ASD, pointed out that there

are substantially lower rates of post-secondary education in this population compared to the general population. In their nationally representative sample of young adults with ASD, they reported that 40% or fewer attended post secondary education programs and even fewer actually received degrees (Shattuck et al., 2012). They also reported that over 50% of the participants did not participate in any type of post-secondary education or employment within two years after leaving secondary school. Another study (Friedman, Warfield & Parish, 2013), found that, within six years of having left secondary school, just over 33% of young adults with ASD had attended college. Hendricks (2010) indicated that there are lower employment rates for adults with ASD and only 25% to 50% of this population was reported to be in any type of paid employment that would actually meet their level of education and challenge them in the workplace.

One reason for this lower representation may be that there are few services to assist these individuals in preparing them for this transition (Howlin, Goode, Hutton & Rutter, 2004; Hagner et al., 2012), which makes it increasingly difficult to take all of the actions needed to create or succeed at a job or career (Taylor & Seltzer, 2011). Without planning and support throughout the transition to adulthood, individuals may find themselves part of these high unemployment rates, which are associated with higher mental health risks, most commonly involving anxiety and depression (Hendricks & Wehman, 2009). Given these predictable challenges and outcomes, it is extremely important to create programs and supports to assist people with HFASD with this transition to adulthood.

One key concept related to successful transition to adulthood around which several programs have been developed for people with learning, intellectual and other

disabilities is that of "self-determination" (Wehmeyer et al., 2010). In over 20 years of research on teaching self-determination to individuals with developmental and intellectual disabilities, it has been demonstrated that individuals who are more self-determined have increased positive outcomes, such as: improvements in academics and organizational skills, higher rates of independent living, more positive employment experiences, recreation and leisure outcomes, as well as more positive life satisfaction and quality of life (Cobb et al., 2009; Field, Hoffman & Posch, 1997; Hendricks & Wehman, 2009; Lee & Carter, 2012; Test, Karvonen, Wood, Browder & Algozzine, 2000; Wehmeyer et al., 2010).

Self-Determination in Transition Aged Youth

There is limited research that solely examines self-determination in the neurotypical transition aged population. However, Arnett (2000) spoke to the development of transitional aged youth, and provided statistics to compare this stage of development between the neurotypical population and those with disabilities.

Arnett (2000) suggested that in industrialized countries, the time period from the late teens through the twenties was a time of profound change during which the young person explores various possibilities in work, love and worldviews. Often, during this time and age, young people are accessing the training and education that is needed to create their adult work lives, and achieve the incomes and occupations that they so desire (Arnett, 2000). Typically, it is towards the end of this period that people have made the life choices, decisions and engaged in important events that shaped their adult lives.

The demographics over the past half-century have demonstrated a shift in the age at which many people experience certain transitional milestones. These statistics

supported Arnett's (2000) idea that there is a new phase in the development of youth, which he called, "emerging adulthood". It was reported that the percentage of young Americans who were obtaining postsecondary education rose from 14% in 1940 to over 60% by the mid 1990s (Arnett, 2000). What may have once been a brief transition has now become a distinct period in the life course.

This trend toward a longer stay in higher education has created a cascade effect. For example, the average age at first marriage for men and women in the 1960s and 1970s was approximately 23.5. However, in 2008, this number increased to an average of 30.1 for men and women (Employment and Social Development Canada, 2015). It was not only this life milestone that saw a shift. The age of first childbirth had increased, from 26.7 in 1975 to 29.6 in 2010 (Employment and Social Development Canada, 2015). Young adults have also delayed their transition from their parental home. Between 1981 and 2011, the proportion of young adults aged 20 to 29 who were living at home rose from 26.9% to 42.3% (Employment and Social Development Canada, 2015). Arnett (2000) pointed out that this shift delays marriage and parenthood until the mid or late twenties, thus postponing the "normal" period for people to be settling into long-term adult roles.

Arnett (2000) proposed that this shift be represented through a new theory of development. "Emerging adulthood, was the term he coined for the period of life course from the late teens through the twenties, specifically the ages 18 through 25. This time represents neither adolescence nor young adulthood, as it is theoretically and empirically different from both (Arnett, 2000). The life stage of "emerging adulthood" was culturally

constructed and appeared to be a good fit in helping us to understand the current trends for transition age youth in North America.

This new theory of emerging adulthood was useful to our understanding of transition aged youth with disabilities. As previously mentioned, many young people with disabilities, and ASD specifically, have challenges and need additional supports to help them visualize, plan and take actions in order to meet their goals and have the life that they want. With that in mind, it often takes them longer to reach these aforementioned milestones and achieve goals in the areas of relationships, independence, education and employment/career. For example, many young people with ASD need support in getting into the academic programs that they want, completing the programs they are in, and eventually getting jobs in a related field.

According to Statistics Canada (2012) almost 80% of individuals with disabilities between the ages of 25 and 64 had at least a high school diploma as compared to 90% in a typical population, suggesting some disadvantage right from the start. However, the difference increased greatly when looking at individuals who had at least a university certificate, diploma or degree at the bachelor's level - 16% of persons with disabilities compared to 31% of those without disabilities (Statistics Canada, 2012). When looking at the employment rate of Canadians between the ages of 15 and 64, it was reported that the employment rate of Canadians with disabilities between the ages of 15 and 64 was 47% versus 74% for Canadians without a disability. Further, for individuals in the 15 to 24 year old range, who have a disability, 32.2% reported that they were employed and this number increased to 55.4% for those in the 25 to 44 year range (Statistics Canada, 2012).

Given that typical young adults are spending more time in this transitional phase, the extended timeline for those with disability may not be so out of sync. Providing information about this new view on "emerging adulthood" to transition age youth with disabilities may help to normalize their experience and reduce the perceived sense of stigma for taking longer than "typical" youth to complete this transition.

Self-Determination in Youth with Disabilities

Research in the field of special education and disability has demonstrated the need for interventions that teach self-determination to transition aged youth with disabilities (Wehmeyer et al., 2010). In 1990, the U.S. Department of Education, Office of Special Education Programs (OSEP) was looking to mark the beginning of a movement that would promote self-determination in youth with developmental and other disabilities (Wehmeyer, 1999; Wehmeyer & Field, 2007). This initiative stemmed from a political event, the National Conference on Self-Determination, which provided recommendations from those in attendance – including people with disabilities, family members and policymakers. The purpose of this conference was to create an understanding of the term self-determination in order to provide direction to the OSEP department. Resulting from the conference, and as a kick-start to the initiative, OSEP funded six new projects that would look to describe the development of self-determination and ideally, assist in designing interventions that would promote self-determination. In time, there would be many other projects funded by OSEP to assist in this movement. Further, this initiative also resulted in several empirical studies, and proven outcomes, methods, materials and strategies that could be used within or outside of school settings (Wehmeyer, 1999; Wehmeyer & Field, 2007).

Researchers believed that the way one designs instruction needs to reflect how children develop and learn (Wehmeyer, 1999). Those involved in the self-determination initiative during the 1990s felt the need to first deliberate the meaning of self-determination. The goal was to conceptualize self-determination in a way that would provide a theoretical foundation and, after, would assist in designing instruction that would promote self-determination. First, researchers began defining and conceptualizing the construct of self-determination before developing a model with which they could test for the emergence of self-determination (Wehmeyer, 1999). Within this research project, when we say "self-determination", we are using a definition first discussed by Wehmeyer (1996), which referred to, "acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference" (Wehmeyer, 1996, p. 24). Wehmeyer went on to specifically define self-determined behaviour:

> *Self-determined behavior refers to actions that are identified by four essential characteristics: (a) the person acted autonomously, (b) the behavior(s) are self-regulated, (c) the person initiated and responded to the event(s) in a psychologically empowered manner, and (d) the person acted in a self-realizing manner (Wehmeyer et al., 1999, p. 56).*

Promoting the self-determination of adolescents with disabilities has become widely accepted as a best practice in secondary and transition services for a number of reasons (Wehmeyer et al., 2010; Wehmeyer, Palmer, Shogren, Williams-Diehm & Soukup, 2013). First, recent literature on self-determination in youth with ASD and other disabilities, had found that the promotion of self-determination and a higher perceived

self-determination status at the end of high school could elicit many positive outcomes within two years after leaving school. Some of these positive outcomes included: better transitional outcomes, more positive career goals, higher rates of employment, community access, higher rates of independent living, financial independence, and positive life satisfaction and quality of life (Shogren et al., 2015). Secondly, research in the field of special education had identified the need to promote self-determined behaviours in students with emotional and behavioural disorders, intellectual disabilities, learning disabilities and autism spectrum disorder. This was a critical component to their learning as they had been found to be less self-determined in comparison to their "neurotypically" developing peers, which was related to less positive outcomes as adults (Shogren et al., 2015; Wehmeyer et al., 2010 and Wehmeyer et al., 2013).

Existing curricula related to teaching components of self-determination were evaluated and reviewed in two meta-analyses, (Algozzine, Browder, Karvonen, Test & Wood, 2001; and Cobb, Lehmann, Newman-Gonchar & Alwell, 2009). Algozzine and colleagues (2001) reviewed 51 studies that focused on what interventions currently exist to promote self-determination, what populations of individuals with disabilities have been taught strategies to promote self-determination, and what the outcomes of these studies were. They found strong evidence that certain component elements of self-determination could be taught to many individuals with disabilities. Although all components of self-determination were represented in the research, it was found that the majority of the interventions being used focused on teaching either choice making or self-advocacy to individuals with intellectual or learning disabilities (Algozzine et al., 2001). Their review also suggested that an increase in self-determination correlated with an increased quality

of life. When referring to quality of life, several factors were examined, such as: increased support networks, positive post school outcomes such as completing a college or military training program, obtaining accommodations that are needed for employment, housing, academics and leisure activities, increased number of individual goals attained, and increased participation in integrated activities (Algozzine et al., 2001). They concluded that interventions that had a longer treatment period and included more self-determination focal areas yielded greater results in increasing self- determined behaviours in individuals with disabilities. Many of these successful interventions included strategies that focused on student involvement in their transition planning and individualized education plan (IEP) planning, or they included direct teaching of specific self-determination components, such as making choices and decisions, goal setting and problem-solving skills (Algozzine et al., 2001; Wehmeyer et al., 2010). Overall, Algozzine and colleagues (2001) concluded that there was limited research demonstrating that individuals exposed to these curricula were effectively learning: self-determined behaviours other than choice-making, that the skills taught could be generalized, and that these curricula could in fact make a difference in the lives of individuals living with disabilities (e.g., only 13% of the studies included measures of outcomes, such as new opportunities at school, leisure activities or any advances in the area of employment; Algozzine et al., 2001). This review of the literature also pointed to the need to demonstrate that self-determination could be taught to youth not typically represented in the self-determination research to date, including the impact on those with HFASD.

Cobb and colleagues (2009) conducted a narrative metasynthesis in which they explored what appears to be the most empirically and theoretically derived effects from

the self-determination literature. They examined six journals and one dissertation that reviewed self-determination literature from as early as the 1970's. Subjects from five of the seven reviews ranged in age from pre-kindergarten to adulthood, with the other two not specifying an age range. Common themes found across studies led to the following conclusions: (a) it was evident that self-determination was a complex and multi-layered construct that means different things at different stages of life; (b) self-determination appeared to be valued by teachers, students and family members who consequently perceived benefits to teachings and/or learning self-determination; (c) self-determination was teachable and was best taught through a variety of curriculums that contain multiple components; (d) higher levels of self-determination could be a predictor of a successful transition into adulthood, and result in more positive adult outcomes such as organizational skills, productivity and quality of life; and (e) for students with intellectual disabilities, there were no significant correlation between an increase in self-determination and increased academic achievement as measured by GPA (Cobb et al., 2009).

These two meta-analyses supported the idea that promoting self-determination in people with disabilities was much needed and feasible. However, Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, (2013) pointed out that the research, including all of those studies reviewed in Cobb et al., (2009), were single-subject studies, and used a correlational or quasi-experimental design, thus providing no clear criteria for determining causality. More specifically, these studies focused on measuring the component elements of self-determination and did not measure self-determination directly as the outcome of the interventions.

In their study, Wehmeyer et al., (2013) aimed to answer whether or not interventions designed to promote self-determination in individuals with disabilities were effective in increasing their scores of self-determination over a three-year period. In order to assess self-determination, the Arc Self-Determination Scale (SDS; Wehmeyer & Kelchner, 1995) and the AIR Self-Determination Scale (AIR-S; Wolman, Campeau, Dubois, Mithaug, & Stolarski, 1994) were used. A longitudinal, randomized trial placebo control group design was used with 371 high school students, who were all receiving special educational services and had a diagnosis of intellectual disability (28%) or learning disability (72%).

The 371 participating students represented six states and 80 high school campuses. Each high school campus was randomly assigned to be a part of an intervention group (approximately 63%), or to be a part of a control group (approximately 36%). From there, the teachers from the campuses who were assigned to the placebo control group, received training and ongoing support on an intervention designed to promote active parental involvement in the education process. This intervention did not include component elements of self-determination and was not expected to raise scores of self-determination. Teachers from the campuses who were assigned to the intervention group were trained in all six programs and were able to choose one of six different evidence-based intervention curricula. Teachers chose an intervention based on their personal preferences as well as the characteristics of the curricula that would best suit the needs of the participants from their school. It was important to note that since the teachers received training in all six programs, students may have received instruction from more than one intervention during the instructional

period. A detailed chart describing the percentage of students in each intervention and the populations that were represented is illustrated in Table 1 below. Participants from both the intervention and control groups completed the two measures at baseline, at year two and year three (Wehmeyer et al., 2013). Results indicated the following:

The AIR-S demonstrated a significant overall increase in scores over time, $F(1, 446) = 32.10$, $p < .0001$), a significant intervention group effect, $F(1, 365) = 8.62$, $p < .005$, and a significant intervention group by time interaction, $F(1, 446) = 6.70$, $p = .01$. When looking at the growth trajectories between both groups, there were differences in the initial AIR-S scores with the intervention group (score of 72.27) scoring higher than the control group (score of 68.85). At the end of the three years, the AIR-S scores from the intervention group had surpassed those of the control group (Wehmeyer et al., 2013). Statistically, these differences in scores were significant.

The results of the SDS suggested a significant overall increase in scores over time, $F(1, 448) = 51.73$, $p < .0001$, and a nonsignificant intervention group effect and group by time interaction, $F(1, 368) = 1.05$, $p = .31$, and $F(1, 448) = 0.21$, $p = .65$ respectively. This suggested that there was no initial difference in scores between the control and intervention groups. Both groups showed a consistent pattern of increasing SDS scores over the three years of instruction (Wehmeyer et al., 2013). It is worth noting that individuals with intellectual disabilities had a greater increase in scores, showing a more positive pattern of growth, when compared to those with learning disabilities. Overall, the results of this study indicated that interventions designed to promote self-determination in individuals with disabilities could create a significant change in self-determination scores. Students who participated in the intervention groups showed a

much greater increase in their self-determination scores and development, compared to those in the control group (Wehmeyer et al., 2013).

Table 1.

Individuals Represented in the Self-Determination Interventions

Program	Percentage of Students in Program	Population Represented in Program
The ChoiceMaker Curriculum	21%	82% learning disability, 28% intellectual disability
The *NEXT S.T.E.P. Curriculum*	7%	62% learning disability, 38% intellectual disability
The Self-Determined Learning Model of Instruction	Not reported	Not reported
Self-Advocacy Strategy	5%	57% learning disability, 43% intellectual disability
Steps to Self-Determination	4%	61% learning disability, 39% intellectual disability
Whose Future Is It Anyway? - 2nd Edition	43%	65% learning disability 35% intellectual disability

With an understanding of these potential benefits, educators agreed that it was important to teach students with disabilities to become more self-determined. This led to the development of various instructional models and curricula such as: *The ChoiceMaker Curriculum* (Martin, Marshall, Maxson, & Jerman, 1993), The *NEXT S.T.E.P. Curriculum* (Halpern, Herr, Doren, & Wolf, 2000), *The Self-Determined Learning Model of Instruction* (SDLMI; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000), the *Self-Advocacy Strategy* (Van Reusen, Bos, Schumaker, & Deshler, 2002), *Steps to Self-Determination* (Field & Hoffman, 2005), and *Whose Future Is It Anyway?* (Wehmeyer, Lawrence, Garner, Soukup, & Palmer, 2004). All of these programs had the same goal in

mind for teaching self-determined behaviours and all of these programs have been researched and found to be effective in teaching self-determination to transitional aged youth (Wehmeyer et al., 2013).

Conceptual Models of Self-Determination

Throughout the 1990s, the work completed on self-determination expanded and changed, resulting in four models of self-determination substantiated by research: The Adaptability Instruction Model (Mithaug, Martin, & Agran, 1987; Mithaug, Martin, Agran, & Rusch, 1988), Functional Model of Self-Determination (Wehmeyer, 1999), A Five-Step Model of Self-Determination (Field & Hoffman, 2006), and Wehmeyer's Social Ecological Approach to Promote Self-Determination (2010). Wehmeyer's models (1999, 2010) are further described below as these are the models on which this MA thesis focused (see Appendix A for a more detailed description on the other two models).

Functional Model of Self-Determination (Wehmeyer, 1999)

In the 1990s, Wehmeyer was the lead researcher on one of the six projects that was funded by OSEP. As their work on self-determination expanded, it resulted in his functional model of self-determination that is graphically depicted in Appendix B. Wehmeyer (1999) proposed that in order to promote the growth and development of self-determination, we needed to understand (a) how self-determination develops and (b) effective models of instructional design and educational support related to teaching self-determination. Wehmeyer (1999) presented the first functional model of self-determination in which he suggested that it takes both capacity (development and learning) and opportunity (environment and experience) working together to create a perception of oneself as being self-determined. Together, capacity and opportunity

influence the individual's perceptions and beliefs of their self-determination in a multi-directional manner; meaning that one's environment and experience could influence self-perception/ belief and that this could, in turn, influence learning and development in a recursive fashion. Wehmeyer (1999) believed that, when this capacity, opportunity and self-perception/ belief in one's own self-determination were combined with a supportive team, this would promote the development of four essential characteristics:

Behavioural autonomy.

Throughout the literature, autonomy had also been called individuation, which developmental psychologists believed was the process or the formation of a person's individual identity and was a critical component in social and personality development (Damon, 1983). Further, behavioural autonomy, according to Wehmeyer (1999) was defined as the *outcome* of the process of individuation, and therefore included taking actions that were (a) independent and free from any external influences, and (b) in accordance with the individual's own preferences, interests and/or abilities.

Self-regulation.

It was said that people who are self-determined are able to self-regulate their behaviours (Wehmeyer, 1999). Self-regulation was defined as a complex response system in which an individual was able to examine their environment and consequently make decisions based on their behavioural repertoire. Decisions were made based on knowledge of how to act in certain situations in order to gain desirable outcomes and to revise these decisions as needed based on new knowledge and experiences (Whitman, 1990). Often, individuals who are able to self-regulate their behaviours have strategies for self-management, goal setting, goal attainment (taking action), problem-solving and

decision-making, as well as observational learning strategies (Agran, 1997).

Psychological empowerment.

The construct of psychological empowerment was included in the definition of self-determination as it allowed us to make a shift from a more behavioural skills-based point of view to one that acknowledges the role of self-perception in behaviour change. The view of oneself as "being self determined" was not only a function of one's actions, but included the contribution of thoughts and beliefs that one could in fact perform the skills needed for successful transition to adulthood (Wehmeyer, 1999). However, this could be a "chicken and egg" challenge from a behavioural viewpoint, as description of oneself as "being self-determined" would most likely follow some positive experiences of having taken committed actions and succeeded toward transitional goals.

Self-realization.

Finally, the fourth characteristic of people who are self-determined that Wehmeyer (1999) identified was self-realization. People who are "self-realizing" have reasonable and comprehensive knowledge about their strengths and their weaknesses and are able to use this information to help themselves capitalize on strengths and seek support to work around weaknesses. Self-realization involved the use of self-knowledge, which came from one's own interpretation of past experiences and interactions and from positive and corrective feedback from significant others, to guide one's future actions (Wehmeyer, 1999).

The ways in which these characteristics of self-determination manifest may change according to age, opportunity, learning capacity and other individual circumstances; however, according to Wehmeyer's (1999) model, each of the four

essential characteristics must still be present in a person to say that he or she was self-determined.

The eleven components of self-determination.

Wehmeyer (1999) identified 11 components that played an important role in the emergence and development of the four essential characteristics:

1. Choice-making skills
2. Decision-making skills
3. Problem-solving skills
4. Goal-setting and attainment skills
5. Self-observation, self-evaluation and self-reinforcement skills
6. Self-instruction skills
7. Self-advocacy and leadership skills
8. Internal locus of control
9. Positive attributions of efficacy and outcome expectancy
10. Self-awareness
11. Self-knowledge

Wehmeyer (1999) added that identifying these 11 components was important for two main reasons. First, this was the level at which instruction occurs; that is, these were the teachable skills we might call "self-determined behaviours". There were a variety of different instructional methods, strategies, materials and supports to help educators teach self-determination by enhancing the student's capacity in these components. Secondly, Wehmeyer (1999) explained that each of these components had a specific developmental course that was procured through various learning experiences. By describing the

development of these components, we could in turn, describe the development of self-determination as it relates to an individual. Further, by understanding the development of self-determination, it became easier to create effective instructional models – and this was in fact what Wehmeyer did. With this understanding and knowledge of the development of self-determination, he had developed strategies for instruction and materials needed for instruction. In order to assess the development of self-determination, Wehmeyer also created a standardized measure, The Arc's Self-Determination Scale, (SDS; Wehmeyer & Kelchner, 1995). This measure had been used extensively in other's research on self-determination (e.g., Lee, Wehmeyer, Palmer, Williams-Diehm, Davies & Stock, 2011).

Wehmeyer's Social Ecological Approach to Promote Self-Determination (2010)

Since 1999, Wehmeyer and colleagues created a more comprehensive model that included a social ecological approach that aimed to promote and enhance self-determination in individuals with developmental disabilities (Wehmeyer et al., 2010). This model took into account the complicated interactions between an individual and their environment, including the people who supported them, and the behaviour changes that resulted (Wehmeyer et al., 2010). Further, this model was based on the premise that building capacity just through teaching skills was not sufficient in order to prepare individuals to use these skills independently. There needed to be a focus on both the capacity side (development and learning), as well as the opportunity side (environment and experience), with a third component focused on ensuring there was a team in place to support the individual to enable their success (see Appendix C for details on this socio-ecological model). This social ecological approach was a five-level model that identified

three social mediating variables (Walker et al., 2011):

Social effectiveness.

This referred to an individual's ability to use social skills, strategies, and behavioural competencies in order to get the social outcomes they wanted (e.g., making and keeping friends, recruiting and building support teams, negotiating, joining groups, etc.).

Social capital.

Social capital referred to the social network, support team, relationships, cooperation, trust and behavioural reciprocities that could improve one's quality of life and help them to make good life decisions that would satisfy their psycho-social needs.

Social inclusion.

Social inclusion referred to the presence and the acceptance of people with disabilities within the community, school and work environments.

These variables were important as they each played a role in determining the effectiveness of the interventions that promoted self-determination (Wehmeyer et al., 2010).

Self-Determination Interventions

The four models mentioned above provided the framework for a variety of programs and resources that were published to help families regarding transitions into adulthood for individuals with ASD. A number of these published programs provided instruction, support and guidance to families and educators, particularly in the US. Examples of several programs included: *Transition From School to Adulthood for Youth with Autism Spectrum Disorder,* (University of Illinois Project SET, 2012); *Transition*

Tool Kit (Autism Speaks, 2011); and the *Life Journey Through Autism: A Guide for Transition to Adulthood*, (Organization for Autism Research, 2006). Although these particular programs provided manuals and guides with beneficial information specific to transitioning into adulthood, they did not have a focus on the teaching of self-determination components.

One of the six self-determination intervention that was described in the literature as being evidence-based and that was manualized was outlined below (see Appendix D and E for the description and comparison of the other interventions). For the purpose of this thesis, the *Whose Future Is It Anyway?* curriculum created by Wehmeyer and colleagues (2004), upon which the *My Life as an Epic Win* curriculum was based, is briefly described and the evidence supporting the curriculum's effectiveness is summarized below.

***Whose Future Is It Anyway? - 2nd Edition* (Wehmeyer, Lawrence, Kelchner, Palmer, Garner, & Soukup, 2004)**

Wehmeyer and colleagues (2004) published a comprehensive curriculum, *Whose Future is it Anyway? - 2nd Edition (WFA).* This curriculum closely represented his Functional Model of Self-Determination (Wehmeyer, 1999) and involved 36 lessons typically delivered over an academic year. The overall goal of this program was to introduce students to the concept and idea of transition planning and to enable them to self-direct instruction. The *WFA* curriculum was broken up into six sections. Section 1, *Getting to Know You*, introduced the idea of educational and transition planning, and self and disability awareness. Students were introduced to the transition requirements in the Individuals with Disabilities Education Act and then they could reflect on previous

transition meetings to find out who was there. Once they had reflected on this, students could decide whom they would want present for future meetings and who they wanted involved in their overall process. In section 2, *Making Decisions*, students learned how to make decisions about transition related outcomes. They also learned about simple problem-solving by working through the steps of the process. Section 3, *How to Get What you Need 101*, gave students the chance to identify and secure community resources to assist with their transition. In section 4, *Goals, Objectives and the Future*, students learned about what goals and objectives were, how to write and then evaluate them and how to track their own progress in meeting their goals and objectives. Section 5, *Communicating*, taught students about different types of communication and about effective communication strategies that could be used in small groups. Finally, in section 6, *Thank You, Honorable Chairperson*, students learned about different types of meetings, and how to develop the skills needed to become an effective team member, leader and self-advocate (Wehmeyer et al., 2013). The materials designed for this curriculum were student directed, with some students needing one on one support to complete the activities, and others being able to complete the activities with total independence.

There was considerable research demonstrating the effectiveness of this program. Most recently, Wehmeyer, Palmer, Lee, Williams-Diehm & Shogren (2011), had demonstrated the effectiveness of the curriculum in increasing self-determined behaviours and students' perceptions of themselves as being self-determined. They conducted a group- randomized experimental study that included 493 participants (mean age was 16 years old) from a variety of disability groups, including ASD. Some of these

subjects were included in the randomized trial placebo control group that Wehmeyer conducted with colleagues in 2013. This study evaluated the *WFA* curriculum compared to a placebo control group over a one-year period on two measures, the AIR-S and the SDS. Wehmeyer et al., (2011) showed that the participants who were exposed to the *WFA* curriculum demonstrated more improved self-determination scores and transitional knowledge skills when compared to those who were in the control group. More specifically, when the two groups were compared over time, results from the AIR-S and the SDS demonstrated significance at $F = 6.22$, $p = .013$, and $F = 0.84$, $p = .05$ respectively. Given the large number of participants, this intervention was found to have a significant impact on the participant's self-determination. However, clinically, the results do not appear that favourable.

Over the course of the year that the students participated in the *WFA* program, self-determination scores as reported by the AIR-S and the SDS increased by approximately 2.5 points and 5 points respectively. In a smaller study conducted by Wehmeyer & Lawrence (1995) and a larger national replication of that study by Wehmeyer & Lawrence (2008), high school students with intellectual disabilities across 21 states were given the *Who's Future Is It Anyways?* curriculum. Participants from both studies gained knowledge about transition planning and skills needed for this transition. Participants also showed a significant increase in self-determination and in positive perceptions of self-efficacy when it came to transition planning.

In developing our own curriculum for transition-age youth with HFASD, the focus was on Wehmeyer's Functional Model of Self- Determination (1999), his updated model, the *Social Ecological Approach to Promote Self-Determination* (2010) and the

intervention that was derived from Wehmeyer's (1999) model, *Whose Future Is It Anyway?* (Wehmeyer et al., 2004). From these models and curriculum, we chose to focus on the observable and measureable components of self-determination that their research had demonstrated were teachable skills for students with disabilities.

Self-Determination in Youth with ASD

After reviewing the literature, Algozzine and colleagues, (2001) determined that there was one area in which much more research was needed - demonstrating that self-determination could be taught. More specifically, this review recognized the importance of further investigating the methods that are most suited to individualize this instruction for the students typically not discussed in the literature - ASD included. Further, Algozzine and colleagues (2001) also stated the importance of knowing more specifics about the best intervention practices and how they could implement them effectively (e.g., was it better to provide interventions that had longer or shorter sessions? Was it better to target the individual or the support system?). Wehmeyer and colleagues (2010) shed some light on this topic because the research showed that self-determination had been linked with positive outcomes and therefore educators find this important to teach all students with disabilities. It had been suggested that students with ASD were less self-determined than their typical peers. Wehmeyer et al., (2010) reviewed the issue of self-determination in individuals with ASD in three ways. First, he argued for the need for interventions that promoted self-determination in students with ASD. Secondly, he reviewed current and evidence-based interventions that may have been beneficial in promoting self-determination in students with ASD. Finally, Wehmeyer and colleagues (2010) proposed that a social ecological approach could be the critical component in the

promotion of self-determination in this population.

There were common characteristics of individuals with ASD that may have made learning and applying the component elements of self-determination challenging; however, none of these characteristics precluded students with ASD from learning these skills. In fact, Wehmeyer and colleagues (2010) suggested that with accommodations and educational supports, students with ASD could acquire and apply these skills (Wehmeyer et al., 2010). Although, due to their challenges in communication, social interaction and executive functioning (Wehmeyer et al., 2010; DSM 5, 2013), considerations must be given to the needs of students with ASD in order to help them be successful. For example, Fullerton & Coyne, (1999) mentioned that individuals with ASD are at risk of learning the components of self-determination in a rote manner. This became a challenge when students did not know how to apply the components to their own lives. In this article, Wehmeyer and colleagues (2010) reviewed the component elements of self-determination, and considered the addition and modification of components that could address the unique aspects of ASD. Further, the specific challenges and strategies that could be used with these students for each component were explored. For example, in looking at goal setting and attainment, research suggested that individuals with ASD have challenges in executive functioning and tended to be more sequential in their thinking and application of goal directed behaviours. Therefore, they may have had difficulties in engaging in multi-goal directed activities at the same time and may tend to jump from activity to activity without successful completion of any goals. Several strategies were proposed that could enable students to self-monitor their progress, break down larger goals into smaller goals, and write down the goals that they are working towards so that

they would have a visual reference.

With respect to applying Wehmeyer and colleagues (2010) social-ecological model to individuals with ASD, they emphasized a focus on enhancing both the capacity/skills of the individual and modifying the environment to support the individual in being successful. Given the pervasive challenges in social understanding and in learning social skills, these challenges were likely to impact on their ability to learn to be self-determined, which in turn, may have limited their academic and adult success. Wehmeyer et al. (2010) suggested that challenges with social skills could lead to issues with social effectiveness and that these issues could overlap with issues related to social problem-solving and the development of self-determination.

Epic Win Design

Rationale for the *My Life as an Epic Win* Course

Despite the skill deficits and learning challenges associated with high functioning autism spectrum disorder (HFASD) and other developmental disabilities, researchers have found that many of these components of self-determination could be acquired through structured teaching (Cobb et al., 2009; Wehmeyer et al., 2010; Wehmeyer et al., 2013). The course title, *My Life as an Epic Win,* was inspired by a TED talk by software game designer and social engineer, Jane McGonigal (2010). She identified the components of an "*Epic Win* attitude" present in the gaming world that she speculated, if applied to real life problems, would give humans the incentive and ability to persist in solving important social, environmental and health issues at local and world levels. The term "*Epic Win* attitude" was used within the *My Life as an Epic Win* course as a metaphor that, as defined by McGonigal (2010), included having: (a) a sense of "urgent

optimism" and belief in one's ability to win the game of life (i.e., self-efficacy); (b) trust that those you play the game with will help you to succeed; (c) "blissful productivity", that was, being happy to work hard and long to achieve one's goals; and (d) "epic meaning", that was, having a mission or purpose, often one that was bigger than one's own self interests. The theme of *Epic Win* attitude was explained to youth and parents in the first session of the course and referenced throughout the course, culminating in participants creating an individual Epic Life Plan video in the second to last session that was edited for participants to take away from the course as a permanent product statement of their accomplishments, life plan and needs for support, which they were encouraged to share with family, friends and other people on their support team.

Development of the *My Life as an Epic Win* Course

The *My Life as an Epic Win* course (hereafter, referred to as the *Epic Win* course) was a 10-week course developed for teaching self-determined behaviours (SDB) to teens and young adults with ASD. The course was initially delivered with the support of a one-year grant from Autism Speaks Canada to Brock University and Woodview Mental Health and Autism Services. This funding allowed for the delivery and evaluation of five administrations of the program from May 2013 – May 2014 (see Appendix F for a timeline of the *Epic Win* administrations).

The course focused primarily on capacity building and, thus, on teaching the more observable and measurable components of Wehmeyer and colleagues' (2004) self-determination model, as this model was demonstrated as effective for people with developmental disabilities through its application of the *WFA* curriculum (Wehmeyer et al., 2011; Wehmeyer & Lawrence, 1995; Wehmeyer & Lawrence, 2008). Specifically,

the *Epic Win* curriculum was designed to engage participants in planning their own future and beginning to take action in fulfilling that future in four key areas of life (a) career/work, (b) continuing education, (c) independence, and (d) relationships (See Appendix G for an outline of the curriculum). Parents were involved weekly in this course so that they could encourage and support the teens and young adults to take actions towards their goals, thus increasing the opportunities for success.

Relative to other courses that teach self-determination such as the 36 session curriculum, *Whose Future is it Anyways?* (Wehmeyer et al., 2004) the *Epic Win* course was significantly shorter (only 10 sessions). Given the brevity of the *Epic Win* course, the focus was on the four components that are described in the next section. Several of the components identified by Wehmeyer (1999) as important to SD development were not explicitly taught or evaluated in this course (i.e., self-instruction, self-evaluation, self-observation, self-reinforcement, internal locus of control, positive attributions of efficacy and outcome expectancy); however, three of these components were the focus of the first three *Epic Win* sessions (i.e., self-awareness, self-knowledge, self-advocacy). Although not the primary measure of success in the course, the participants were able to demonstrate some of these components through a culminating video activity presented during the last session. The young adults, if they so desired, participated in an interview that was edited into a short (< 5 min.) video, in which they discussed their interests, strengths and accomplishments, their goals for their future, and what kind of support they would need to achieve that future. During the last celebratory session, if the young adults wanted to share, the videos were shown to the group.

Self-Determination in the *My Life as an Epic Win* Course

The 10-week course focused mainly on teaching the first four of the 11 components in Wehmeyer's (1999) self-determination model (choice-making skills, decision-making skills, problem-solving skills and goal-setting/ taking committed actions). These components were selected as they were concrete, easily measured and therefore, made sense as the foundation around which to design a transition to adulthood empowerment course.

Choice and decision-making.

Starting in the first session of the *Epic Win* course, participants were encouraged to make choices and decisions for themselves by creating their futures starting with a five-year "vision" across four key areas of adult life (work/career, education, independence, and relationships). Following this visioning exercise, in the third and subsequent sessions, participants were taught how to create one-year goals and then shorter-term SMART goals and action plans achievable within 1-3 months. SMART goals referred to goals that were: specific, measurable, achievable, relevant, and time-bound (Rubin, 2002). This goal setting and action planning was connected with weekly homework as the participants were asked, with parent's support, to take committed actions that would lead them closer to their short-term goals.

Goal attainment.

Each week, after spending time during the session to create SMART goals and action plans related to these SMART goals (Rubin, 2002), the participants would leave the group having identified and promised to take at least one action that would get them closer to their goal. Upon return the following session, the facilitators checked in with the participants to see who had followed through and completed their promised action,

reinforced actions taken toward goals or achievement of goals, and explored what got in the way of taking actions.

Problem-solving skills.

Teaching problem-solving skills was a key component of the *Epic Win* curriculum as it was intended to help participants deal effectively with barriers and potential roadblocks they were likely to encounter as they took actions toward their goals. Participants followed a problem-solving template and practiced solving problems by discussing and acting out various solutions specific to the four areas of life. It was assumed that problem-solving skills would allow them to remain calmer in the face of challenges and work collaboratively with their parents in overcoming imagined and real barriers. Role-play was used to demonstrate the process of problem-solving, to collectively explore best solutions to problems identified by participants, and to address the emotional challenges of dealing with these common barriers (Wehmeyer, 1999).

Delivery of the *Epic Win* Course – Winter 2014

Eight individuals ranging in age between 15 and 21 participated in the Winter 2014 *Epic Win* course. Of these eight individuals, seven were male, one was female, and all individuals had a diagnosis of HFASD. As well, these individuals all appeared to have intelligence in the normal range of functioning (although this was not formally tested). These individuals met once a week for ten weeks from January to April 2014, for a two and a half hour session. Concurrently, one or both parents met with the other parents and a facilitator in an adjacent room during which they received a parallel curriculum. Four of the ten sessions had 30 minutes of joint exercises with parent-youth dyads working together on one of four target skills (active listening, goal setting, action planning, or

problem-solving). Participants and parents gave written permission to allow the pre- and post-course data to be used for evaluation of the *Epic W*in's effectiveness.

Analysis of the Winter 2014 *Epic Win* course

A qualitative program analysis was conducted on the Winter 2014 delivery of the *Epic Win* program. This iteration of the course was chosen for analysis, as it was the fifth delivery of the program, following a series of changes being made to the curriculum with each delivery. As stated, this group consisted of eight young adults and their parents who attended regularly and were asked to complete the pre- and post-course questionnaires to assess self-determination.

The two questionnaires used for this qualitative analysis were the aforementioned Self-determination Scale (SDS) and the Vision-Action Questionnaire (VAQ). The SDS was chosen, as it was a standardized self–report measure for adolescents with cognitive disabilities. This tool was developed to reflect the four essential characteristics that Wehmeyer & Kelchner (1995) suggested play a critical role in a person being self-determined. Each of the four domains was tailored to look at one of the essential characteristics. In each domain, there were questions relating to some of the eleven components that would make up these four essential characteristics. The VAQ was developed to evaluate the participant's ability to learn components of self-determination (e.g., choice making, decision-making, goal setting and attainment, problem-solving and self-awareness). A more detailed description of these tools are described in Chapter 2: Methodology.

Research Questions

The following research questions were explored in this MA thesis:

1) Do older teens and young adults who completed the *Epic Win* course show improved self-determination as measured by:
   a) Increases in pre- and post-course assessment on the SDS (looking at the SDS total score and scores of Subdomain 2: Self-regulation).
   b) Increases in self-determined behaviours as measured by the VAQ through a pre- and post-course qualitative analysis of goal setting, goal attainment and problem-solving.

CHAPTER 2

Research Methodology

To investigate the impact of the *Epic Win* course on participants' perceived self-determination, a comparative case study design using descriptive and interpretive analysis was used to describe participants' engagement with protocols relating to self-determination before and after having participated in the Winter 2014 *Epic Win* course. More specifically, archival data from three participants' was used to describe responses on two protocols, within and across participant. The two protocols used were the Arc's Self-Determination Scale (SDS; Wehmeyer & Kelchner, 1995), a standardized measure of self-determination, and the Visioning and Action Questionnaire (VAQ), an investigator-developed questionnaire about participants' self-determined behaviours.

The original intention for this MA thesis was to use a more traditional empirical design to compare pre- and post-course measures for all eight course participants. However, in looking at the archival data, we found a considerable number of incomplete data sets. This was not a total surprise given the challenges people with ASD can have with executive functioning and planning skills needed for follow through; given that their support teams (i.e., parents) tend to have busy and often chaotic lives, this may also have limited their ability to support their youth in getting the forms complete. This challenge had reportedly impacted on data collection in similar studies (Wehmeyer et al., 2010). In the end, we ended up with only three complete data sets. Although it was clear that we had not collected the data we had hoped for, Dr. Ward and I decided that this delivery of the course was still worth researching and that it would be useful to analyze the data that we had collected. Therefore, a decision was made to change the design to incorporate

some qualitative analyses of data on the three participants who had mostly complete datasets and who were present for most of the program sessions.

The permission to use archival data from the young adult participants' responses on these two measures was submitted to the Brock University Research Ethics Board and received approval on August 22nd, 2014 (see Appendix H).

Participants

Subject Selection

Participants were recruited through agencies in one region of Ontario that provide services and supports for individuals with ASD. Some participants also heard about the *Epic Win* program through word of mouth by members in their communities such as family, friends, doctors or school personnel. Eight participants joined this Winter 2014 delivery of the program. Each of the eight participants had a parent report, or self-reported diagnosis of Autism or Asperger's that we took at face value without confirming through diagnostician report or direct assessment. For this MA thesis, archival data from three of the eight participants was analyzed. These three participants had completed both pre and post-course assessments that were intended to be used as preliminary measures to assess treatment effectiveness of the *Epic Win* course in improving self-determination (See Appendix I for subject selection). All three participants were present for 90% of the sessions, with each of them missing no more than one session for reasons of ill health or family vacation. For sessions missed, the participants and parents were provided with handouts at the next session of the information they missed with a brief description of the material.

Description of Three Case Study Participants

Gene.

Gene was a 20-year-old man with a diagnosis of an Autism Spectrum Disorder and appeared to have intelligence in the normal range of functioning. He lived at home with his mother, father and his younger sibling. Gene had completed high school and was taking and passing courses at the college level in a fitness trainer program. In the first session, Gene spoke of his two great passions, heavy metal music and being a fitness instructor. His parents also reported that every night, Gene would stay home to listen to his favourite heavy metal bands and practice playing the air guitar alone in his basement.

Sherman.

Sherman was a 15-year-old teen with a diagnosis of High Functioning Autism Spectrum Disorder. Sherman appeared to have above average intelligence. At the time of the study, Sherman was the youngest member of the *Epic Win* group and was finishing up his grade 10 year in high school. He lived at home with his 2 younger siblings, and his mother and father. Sherman had strengths in the areas of math, physics and robotics. He had travelled with his high school robotics team to compete in regional and world competitions in which they have placed in the top three, on more than one account. During the course, Sherman expressed several different career interests: genetic engineering, with a possible focus on stem cell research, law, robotics, mechanical engineering, and aeronautics. Sherman had won academic achievement awards and robotic competitions at school as well.

Robin.

Robin was a 20-year-old aspiring voice actor diagnosed with Asperger's Disorder. Robin was talented in mimicking popular television characters and famous actors. Robin's parents reported that he had intelligence in the normal range of functioning. He was an only child and his parents lived north of Toronto. At the time of the course, Robin was living with his grandmother as he was taking some courses at a local college. His father drove two hours every week to participate in the sessions. At the college, Robin assisted in creating a group for individuals with Asperger's and helped in running events at the college during Autism Awareness month. Robin enjoyed art (drawing, specifically) and was talented in designing characters through computer graphics programs.

Analysis of Questionnaires

First, a description as to how the pre- and post-course questionnaires were administered within the *Epic Win* course will be provided. Following that, the two questionnaires (Arc's Self-determination Scale, Wehmeyer & Kelchner, 2005: the Visioning and Action Questionnaire developed by the investigators) will be described. Finally, data analysis of this archival data for the three participants on these two measures will be presented.

Administration and Collection of Pre- and Post-course Questionnaires

The Arc's Self-Determination Scale (SDS) and the Visioning and Action Questionnaire (VAQ) were completed by participants following the first session of the *Epic Win* course. In the first session, participants were encouraged to start thinking about their aspirations in four areas of life (i.e., Further education, Career/ Work, Independence, and Relationships) and, before the second session, to use the VAQ to record their goals

and actions. The intention in pre-exposing them to the conversation about goal setting in four areas of life was to help participants think more broadly about their futures, beyond typical thoughts about getting a job or starting a career. Specifically, after the four areas of life were distinguished, the group discussed various skills or outcomes related to each area, around which individual goals could be identified. For example, the participants were told that the area of Relationships could include, but was not limited to goals around relationships with family members, friends, coworkers, romantic relationships, or other long-term relationships. Across the four areas, examples were solicited from participants about what was important to them. While listening to other participants identify their goals, it was emphasized that goal setting was a very personal process based, for the most part, on self-knowledge (i.e., knowledge of one's interests, preferences, talents, and skills).

Following Session 1 discussion, participants were then given the SDS and VAQ and asked to complete both and return them in the following session. About half of the participants returned the SDS and the VAQ in Week 2 and some needed additional prompts to return them in Week 3; two of the eight participants never returned the two measures. After Week 10, they were asked to complete the SDS and VAQ again and return both measures in the follow up session, two weeks later, during the last session in which the participants were able to view the Epic Life video's they had created. Both Gene and Robin submitted their post-course questionnaires within a month of the end of the course. The third participant, Sherman returned the SDS within two months of the completion of the course, and the VAQ was returned within three months of course completion (after much prompting).

The Arc's Self-Determination Scale (SDS)

Description of questionnaire.

The SDS (Wehmeyer & Kelchner, 1995) was a 72 item standardized self–report measure for adolescents with cognitive disabilities. The SDS was written and developed by Wehmeyer & Kelchner (1995; see Appendix J) with support from The Arc National Headquarters and funding from the U. S. Department of Education. The two primary purposes of this scale were:

1. To provide students with cognitive disabilities and educators a tool to assist in identifying student strengths and limitations in the area of self-determination; and,
2. To provide a research tool to examine the relationship between self-determination and factors that promote or inhibit this important outcome.

According to Wehmeyer (2005) the SDS was standardized using the responses of 500 individuals who were 14-22 years old (mean = 17.08) and who were diagnosed with a mild intellectual disability and/or learning disabilities. These individuals were from schools in urban, suburban and rural districts across five different states in the USA. All students were identified by their school district as having received special education services at the time that they were responding to the questionnaire. Although the SDS was not normed on a sample of individuals with HFASD, it was selected as the only tool currently available to assess an individual's level of self-determination.

The SDS was divided into four domains (a) Behavioural Autonomy, (b) Self-regulation, (c) Psychological Empowerment, and (d) Self-realization, each measuring what Wehmeyer & Kelchner (1995) called the four essential characteristics of self-

determined behaviour. This tool allowed individuals to share their thoughts and experiences related to empowerment and self-determination.

The Behavioural Autonomy domain consisted of 32 questions about the individual's independence, preferences, beliefs, interests, and abilities. These questions involved statements and required the respondent to chose one of four responses that best told how/ how often they reacted in that situation. Domain two, Self-regulation, had questions that allowed the individual to demonstrate their ability in the area of interpersonal cognitive problem-solving and goal setting and task performance. The Psychological Empowerment domain consisted of 16 questions in which the individual must choose from one of two statements that best described themselves. Many of these statements were in relationship to whether or not the individual did what he or she wanted and made decisions for him/herself versus allowing others to make choices for them. Finally, the Self-realization domain consisted of 15 items in which the individual must agree or disagree with statements about their individual strengths, weaknesses and view of themselves. Wehmeyer & Kelchner (1995) contended that higher scores in each area represented stronger self-determination skills in an individual.

The pre- and post-course SDS was scored using the scoring system provided in the SDS procedural manual created by Wehmeyer (2005) to determine if any changes in participant perception of self-determination occurred between the first and second administration.

Procedures for SDS analysis.

For this thesis, the SDS analysis involved a description of the change in responses pre- and post-course, within and across participants. The Self-Determination Total Score,

as well as the total scores for each domain were described briefly, and were useful in pointing out where responses shifted from pre-course to post-course. The SDS Total Score represented the young adult's self-perception of their level of self-determination, which Wehmeyer (1999) found to be correlated with other observable measures of self-determined behaviour. However, for this thesis, qualitative analysis (including an item analysis) of the responses and shifts in responses from pre- to post-course appeared to be a more meaningful way to analyze this data, rather than a comparative analysis of the pre- and post-course scores.

Greater focus was given to the analysis of Domain 2: Self-Regulation responses, as this domain measured several of the self-determined behaviours that were taught within the *Epic Win* course. The domain focused on problem-solving and goal setting and these topics were areas that participants had spent considerable time learning and practicing throughout the course.

Self-Determination Total Score.

According to Wehmeyer (1995), in order to score the SDS, the investigator must first determine the raw scores in each of the domains and subdomain areas. A total score was given for each subdomain/ domain and then interpreted into percentages based on conversion tables in order to provide two separate percentile scores:

1. Comparison with the sample norms (Norm Sample)
2. Percentage of positive responses (Positive Scores)

For the purpose of this thesis, we used the Positive Scores, as the population for this study varied from the Norm Sample on which the SDS was standardized. Also, the focus of this study was intended to compare within and across participant changes on pre

to post-course scores, making the normative sample comparison less relevant. The Positive Scores indicated the percentage positive in each subdomain (Wehmeyer, 1995). The percentage positive could also be described as the percentage of responses that were consistent with perfectly self-determined behaviour, as defined by Wehmeyer and his team. The percent positive scores were calculated by dividing 100 by the number of items in a domain or subdomain then multiplying that by the number correct. Wehmeyer (personal communication, August 5, 2015) explained that this provided a score representing the percentage of correct responses.

Domain 2: Self-Regulation.

Wehmeyer (2005, p. 69) suggested that the most important components for self-regulation were captured in these two parts of the Self-regulation domain:

2a. Self-regulation: Interpersonal cognitive problem-solving. In this domain of the SDS, there are six problem-solving items. In each, a social problem was described, following by a statement of a positive outcome. Respondents were asked to use the lined space between the problem statement and outcome statement to write what would need to happen to *best* connect the beginning and end of the scenario. Respondents were, in essence, asked to generate the means in which the outcome was achieved. The answers were scored based on relevancy, and evaluated on a scale of 0 to 2, with 0 meaning that the answer was completely irrelevant, and a 2 representing an answer that included a relevant and plausible means to the outcome.

2b. Self-regulation: Goal setting and task performance. In this domain of the SDS, three questions were asked about the individual's plans for the future in the areas

of living, working and transportation. This subdomain was most relevant as these were all areas discussed and trained throughout the *Epic Win* program. For each question, respondents were asked to state whether or not they have made action plans to achieve specific outcomes, and, if so, what the plans/goals were. Finally, they were asked what actions could be taken to meet those goals. Scores ranging from 0 to 3 were assigned for this subdomain based on the number of goals and actions that the student generated (Wehmeyer, 2005).

Inter-observer agreement of the SDS.

Inter-observer agreement (IOA) was conducted in order to eliminate any biases when scoring the SDS. The SDS was a standardized tool, and by including a second rater to conduct IOA, we could be more confident that the investigator scored the tool the way that it was designed to be scored. For all three participants, the SDS was scored by two: facilitators, the investigator, and another graduate student who co-facilitated later *Epic Win* courses, but was not involved with the Winter 2014 application of the program. The IOA was conducted by comparing the raw scores in each subdomain. Specifically, the IOA was calculated by taking the number of agreements between the facilitators and then divided by the number of agreements plus the disagreements. The coefficient was then multiplied by 100 to compute the percentage of agreement.

Visioning and Action Questionnaire (VAQ)

Description of questionnaire.

The Visioning and Action Questionnaire (VAQ), developed as a pre- and post-course measure for the *Epic Win* course, consisted of four questions (and additional follow up questions) created by the investigators related to the participant's vision for the

next 5 years (see Appendix K). These questions were designed as a participant self-report measure of goal setting and goal attainment across four areas of life (i.e., work/career, continuing education, independence and relationships). Specifically, the participants were asked to (a) identify goals in the four areas of life and what actions were taken towards achieving these goals in the past month, (b) list current social supports in achieving these goals (c) give an example of problem-solving in dealing with barriers to achieving one goal, and (d) discuss their diagnosis and the strengths and challenges associated with having ASD that may impact on their transition into adulthood. It was expected that, following the *Epic Win* course, the participants would have clear goals, take committed actions, and identify supports around fulfilling on their 5-year vision. As well, they would demonstrate problem-solving skills in dealing with barriers to success.

VAQ analysis procedure.

Through descriptive and interpretive analysis of the VAQ responses from three participants, we could explore the relationship between being involved in the *Epic Win* course and the perceived development of self-determined behaviours.

Written responses of all four questions on the VAQ were analyzed through a manifest and latent pre- and post-course analysis. Manifest analysis described the content and the elements that were physically present in a dataset. Latent analysis included an interpretive reading of the dataset. We looked at the data from two different perspectives (a) within participant, and (b) across participant. The investigator looked for observable patterns and salience in the responses to ascertain whether or not the participant's perception of their own self-determination had shifted or changed from pre- to post-course. Changes in the quality of responses were analyzed to deduce if participating and

taking actions through the course influenced their perception of themselves as being self-determined. More specifically, this qualitative analysis would help to determine if participants became more able to articulate having set measurable and achievable goals and to report having taken more committed actions to fulfill on these goals following the *Epic Win* course.

CHAPTER 3

Results

In this chapter, an analysis of the SDS and the VAQ for the three case study participants was explored. Specifically, when looking at the SDS, the pre and post Self-determination Scale Total Score and the score from SDS Domain Two: Self-Regulation were examined for each of the three participants. As well, a qualitative analysis of individual responses, within and across participants helped to identify any meaningful shifts in perception related to self-determination.

Following that, each of the participants' responses to the pre and post VAQ were analyzed. Across the four VAQ questions, each of the participants' pre-course responses were compared to their post-course responses. After all three participants' responses had been described; within- and across-participant comparisons were used to identify any shifts in self-determined behaviours (i.e., goal setting, actions taken, problem-solving, and use of support). Throughout the analysis of both the SDS and the VAQ, quotes from participants were used to help further explore and understand their pre-existing capacities to be self-determined and the shifts in ability or perception that did occur following the *Epic Win* course.

Finally, process analysis related to the limitations of the design, delivery and evaluation of the *Epic Win* course provided direction for improving future research on this program and on assessing self-determination in this HFASD population.

The Arc's Self-Determination Scale Analysis

Gene

Self-Determination Total Score.

In completing the SDS at the beginning of the course, Gene responded to questions on only the first two of the four SDS Domains. Gene's score in Domain 1: Autonomy, demonstrated an increase (from 61% to 71%) as does his score in Domain 2: Self-Regulation (from 81% to 90%). All domains were completed post-course, with a Self-Determination Total Score of 79%, which suggested a moderate level of self-determination. Given the missing data, no comparison could be made pre and post-course.

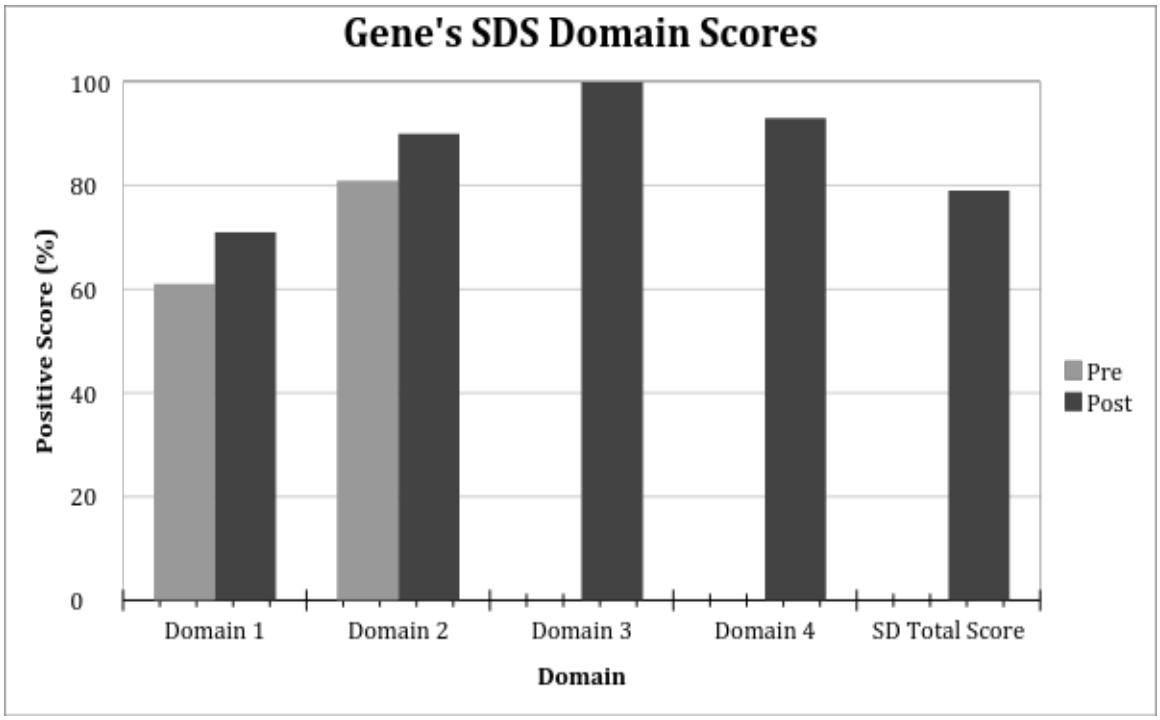

Figure 1. *Gene's SDS Domain Scores*

Domain 2a Self-regulation: Interpersonal cognitive problem-solving.

Gene came into the course with a very high score in this subdomain. His pre-course positive score was 91%. In the post-course SDS, Gene's score in this domain decreased to 83%. Relatively high scores on both the pre- and post-course questionnaires indicated that Gene was already able to solve social problems prior to the course. The

slightly lowered score in this subdomain was attributed to the fact that Gene answered similarly on both pre- and post- course SDS, except for one question in which he did not provide enough detail to link the problem and the solution (question 37). Question 37 read as follows:

> *Beginning: You are in a club at school. The club advisor announces that the club members will need to elect new officers at the next meeting. You want to be the president of the club.*
>
> *Ending: The story ends with you being elected as the club president.*

Participants were expected to fill in the story explaining how the character in the scenario got from the problem to the solution. In the pre-course, Gene's response for completing the story was, "*I went to convince the advisor of my worth. I proved that I am worthy of becoming the club president.*" Gene's post-course response showed slightly less detail in what he did to become president. "*I talked to my advisor about it and got some more information. I did whatever it takes to become the president*". Given overall high performance on this measure (despite insufficient detail on a couple post-course questions), one could infer that Gene did not have a skill deficit in the area of cognitive problem-solving. He was able to connect the problem and the solution for most items at both pre-test and post-test.

Domain 2b Self-regulation: Goal setting and task performance.

A score of 67% in the pre-course subdomain of goal setting and task performance suggested that Gene had moderate skills in the area of setting goals and naming actions to attain those goals. For one of the three questions, Gene checked off that he had not yet planned for that scenario (giving him a score of 0 out of 30). This specific scenario was

asking what type of transportation Gene was planning on using after graduation. In the post-course response, Gene was able to answer this question and provide actions that he must take in order to have his own car. Gene's score increased to a post-course score of 100% as he had complete, well-thought out answers for all three scenarios. Gene's responses to the SDS questions in this subdomain would suggest that he started the course with moderate skills and ended the course with a higher level of goal setting and action attainment skills.

Within-subject SDS Analysis.

Gene's pre- and post SDS scores demonstrated a shift in his responses before and after the course, specifically in Domain 2. Subdomain 2a, where there was a focus on problem-solving, showed a decrease in his score from pre- to post-course, but ultimately, both of these scores were fairly high and suggested that Gene demonstrated the ability to problem solve even prior to the course. Subdomain 2b focused on goal setting and specifying actions needed to fulfill those goals; Gene's scores demonstrated a positive increase in this subdomain. At the beginning of the course, Gene's score demonstrated that he had a moderate ability to write about his goal setting. At the end of the course, Gene was able to express goals in all areas discussed on the SDS, as made evident by his transportation goals stated above. Specifically, he was able to generate actions that were related in getting him closer to reaching his goals. In the post-course, Gene came into this course showing that he perceived himself as being self-determined in many areas of life. It was evident through the examples described above that there were differences in Gene's responses before and after the course.

Sherman

Self-Determination Total Score.

Pre- and post-course, Sherman's Self-Determination Total Score on the SDS increased from a fairly low score of 48% to a somewhat higher score 65%. Three of the four domains showed increases in scores - even if only by a couple points, as shown in the graph below. Domains 1: Autonomy (positive score increased from 33% to 55%) and Domain 2: Self-Regulation (positive score increased from 67% to 90%) accounted for the majority of the increase in scores suggesting that Sherman's view of his autonomy shifted from pre to post and he demonstrated a better ability to problem solve and set goals. He also demonstrated higher scores pre- and post-course in Domain 3: Psychological Empowerment (with positive scores going from 81% to 88%). The decrease in score was in Domain 4: Self-Realization (with Sherman's positive score decreasing from a 80% to 67%). In this section, Sherman was presented with 15 questions in which he could select, "agree" or "don't agree". His decrease in score was due to responding differently to five questions, resulting in a two-point decrease.

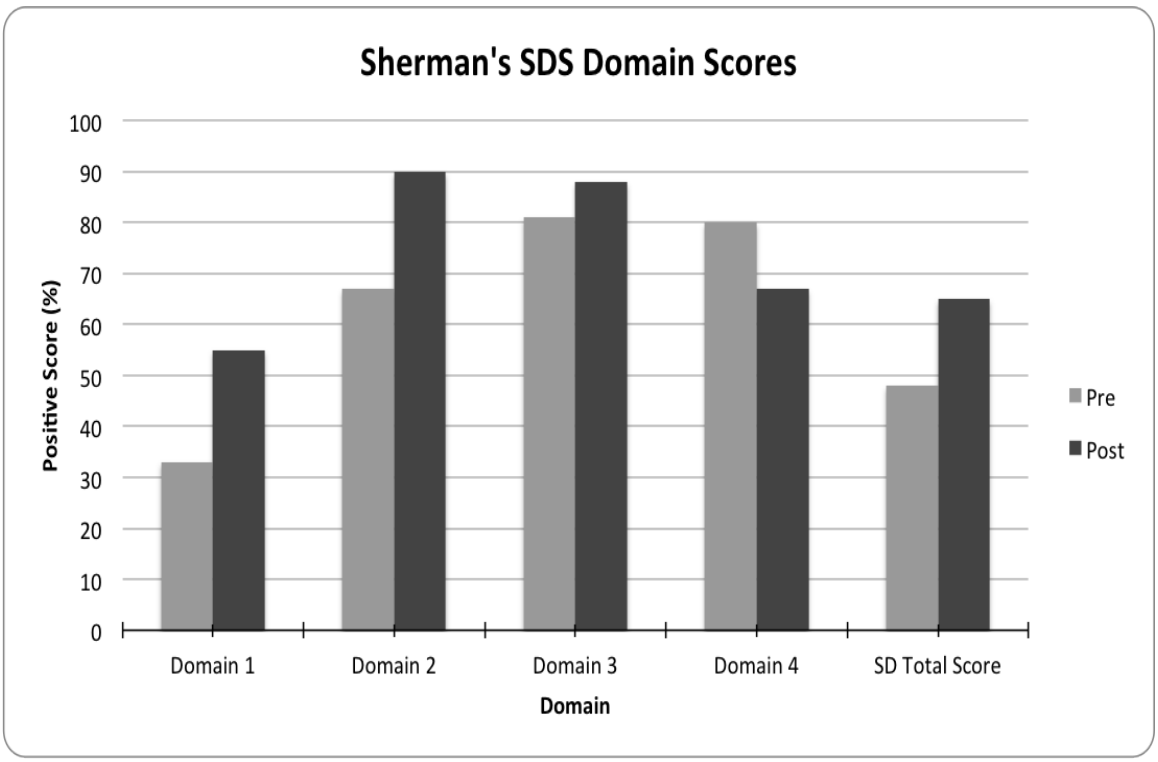

Figure 2. *Sherman's SDS Domain Scores*

Domain 2a Self-regulation: Interpersonal cognitive problem-solving.

Sherman also came into the course with a high score in this subdomain. His pre-course positive score was 91%. This demonstrated that Sherman already had a high ability in the area of interpersonal cognitive problem-solving prior to the course. The decrease to a score of 83% in the post-course assessment, similar to Gene, reflected a small change in the way he responded to a couple of the questions. The minor changes in scores up or down in questions 33, 34 and 37 reflected the inclusion or exclusion of subtle details. For example, problem-solving question 34 was as follows:

> *Beginning: You hear a friend talking about a new job opening at the local bookstore. You love books and want a job. You decide you would like to work at the bookstore.*
>
> *Ending: The story ends with you working at the bookstore.*

In the pre-course SDS, Sherman's response for the middle of the story was,

"*I walked down to the bookstore with my resume in hand and ready to talk for the interview. One I got there, I realized that the people before me were getting jobs one by one. The interview only took about 5 minutes and they were just handing out these jobs like candy to children.*"

There was a qualitative difference between the two responses. Sherman's post-course response was similar yet less clear as to how it leads to the result of getting the job. Sherman wrote,

"*The next day you arrive at the bookstore and went to the manager and took the interview. After you finished and was about to leave, your friend went inside the library and went to do his interview.*"

This decrease in score can be attributed to the omission of detail on this one problem-solving item in connecting the beginning and ending of the story. The post-course response may also have reflected an underlying realistic concern about competition for the same job. However, we cannot really interpret whether this decrease in score represents a meaningful change, given that it was the only one of six problem-solving items that showed any change.

Domain 2b Self-regulation: Goal setting and task performance.

Sherman had a lower score (33% positive score) in the pre-course subdomain of goal setting and task performance. He had some ideas of goals for himself and actions needed to get to those goals. Sherman had a complete and well-thought out answer for one of the three goals, which was related to transportation he would use after graduation. For the other two questions, asking Sherman where he would like to live and work after

graduation, Sherman stated that he had not planned for these scenarios as of yet. These unplanned responses resulted in him receiving a score of zero for those two questions; however, given his young age (15 years old) these responses are not surprising as in Grade 10 many young people have not yet contemplated living away from home, nor do many look seriously at where they want to work. On the post-test, however, Sherman's score increased to 100% in this subdomain as he had written answers indicating that he had thought about these three scenarios, and he wrote down some ideas related to actions he must take to achieve goals in each scenario. For the two questions that Sherman had responded, "*I have not planned for that yet*", Sherman still selected that answer on the post-course SDS. However, his responses did change as he wrote actions on what he must do. For example, when asked about where Sherman wants to work after graduation, Sherman wrote the following for things that he must do in order to reach this goal: "*Find out where I want to work, will this job be good for me, will it have good pay, and the hours will have to be reasonable*". Sherman's post-course responses to the SDS questions in this subdomain demonstrated, although he did not write out actions, he wrote out considerations that he would have to do to help him generate a goal. This demonstrated that he had a high level of clarity in setting goals for himself, and understanding actions he must take to get himself to achieve those goals.

Within-subject SDS Analysis.

Sherman demonstrated an increase in his Self-Determination Total Score on the SDS, signifying that, after the course, he displayed a higher ability to be self-determined. Sherman came into this course with a moderate ability to problem solve, set goals and name actions he could take to achieve those goals (2A). While his post-course scores

represent a meaningful increase in his ability to set goals, Sherman's problem-solving score decreased somewhat as he provided insufficient detail on a couple of the post-questions. This does not necessarily suggest that there was a skill deficit in the area of cognitive problem-solving as on both the pre- and post-course questionnaires, Sherman demonstrated that he was capable of connecting the problem and solution for most questions. Sherman's Self-Realization score did decrease post-course, but he did have a relatively high score in this area coming into the course. All three of the pre-course scores demonstrated that Sherman was providing responses that displayed self-determination, even from the beginning of the course.

Robin

Self-Determination Total Score.

Robin's Self-Determination Total Score, as measured by the positive scores, increased minimally from a 63% to 69% during the course. As made evident in the graph below, Domain 1: Autonomy, increased minimally (from 59% to 62%), whereas Domain 2: Self-Regulation, accounted for the majority of the increase in the pre- and post-course scores (from 71% to 86%) and will be discussed further below. Domain 3: Psychological Empowerment showed a similar increase (from 69% to 81%). In Domain 3, at pre-test Robin endorsed 11 of the 16 "psychologically empowering" statements; while at post-test, this increased to 13 endorsements. For example, in item 42, when given a choice to endorse one of two statements (e.g., *I usually do what my friends want* vs. *I tell my friends if they are doing something I don't want to do*), Robin endorsed the first statement at pre-test, and the second statement at post-test. Robin's scores remained the same pre and post in Domain 4: Self-Realization (73%).

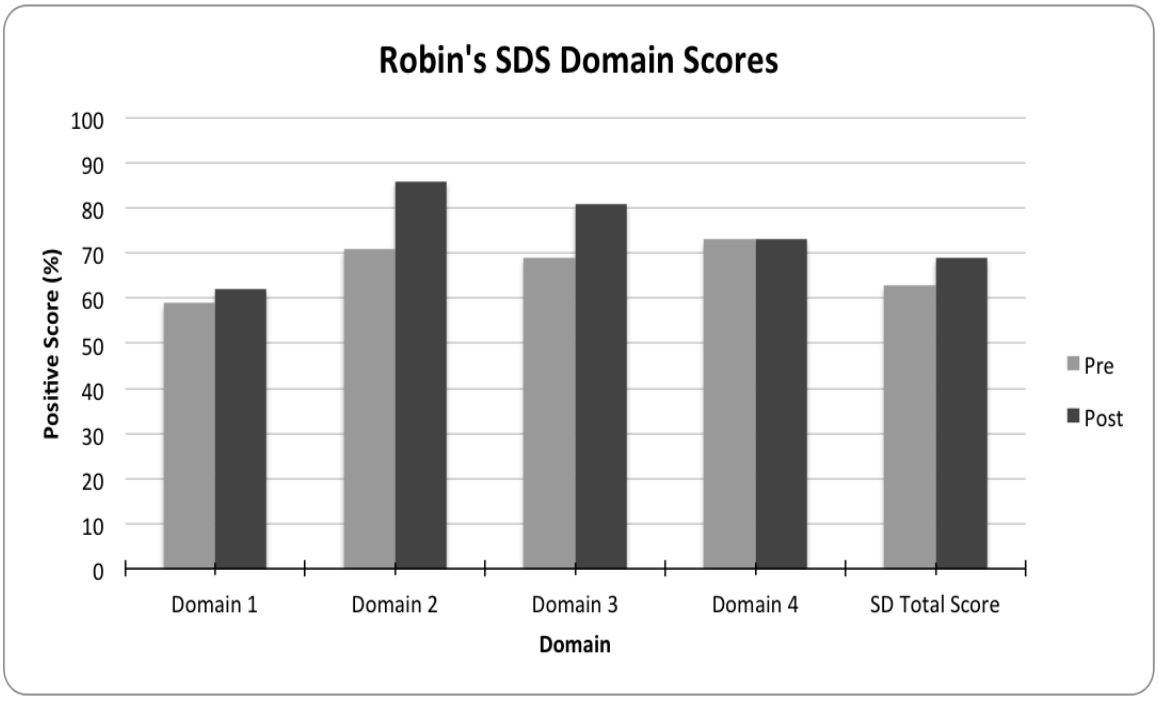

Figure 3. *Robin's SDS Domain Scores*

Domain 2a Self-regulation: Interpersonal cognitive problem-solving.

At the pre-course assessment, Robin's positive score was 50%. This may have indicated that Robin came into the course showing a moderate ability to problem solve social situations. In the post-course, Robin's score increased in this subdomain to 75%. Robin appeared to be more able to respond to questions involving interpersonal cognitive problem-solving and was able to better choose a means to an outcome in the hypothetical problem-solving scenarios. During the pre-course, all six of his questions were scored as a one out of two. During the post-course, Robin received a two out of two on all questions except 34. An example of a question in which Robin demonstrated the ability to better connect the beginning and the end of a problem-solving situation was made evident in question 38.

Beginning: You are at a new school and you don't know anyone. You want to have friends.

Ending: The story ends with you having many friends at the new school.

In the pre-course, Robin's response for the middle of the story was,

"*At first I would look around and see who would be a good friend or friends to me.*" Robin's post-course response added detail on how he arrived at the given ending. "*After a class/ course, I go to lunch and ask if I can join a group, I ask how they are, what their interest are and see if they would like to meet them another time during the week*". The latter response demonstrated a more complete response as Robin explained how he would get into action around making friends. One could infer that this response may have also demonstrated that Robin learned something in the course about the actions that are needed to make friends, as these steps were more clearly outlined in his post-course response.

Domain 2b Self-regulation: Goal setting and task performance.

Robin had a score of 100% in the pre-course subdomain of goal setting and task performance. This demonstrated that Robin had a clear idea of goals for himself and actions needed in the areas of independent living, work and transportation. Robin's score remained at 100% at post-test. Robin's responses to the SDS questions demonstrated that he had goals for himself, and he was able to identify several actions to attain these goals.

Within-subject SDS Analysis.

Robin came into this course demonstrating many self-determined behaviours. There was an increase in his post-course Self-Determination Total Score, and in his problem-solving scores. His goal setting remained high at 100% both before and after the

course. Aside from these favourable results, it's important to note that not all of the items endorsed responses that demonstrated a more self-determined perspective. Question 51 in Domain 3 was noteworthy. It asked the individual to choose one of two statements (I don't know how to make friends vs. I know how to make friends). Robin selected on the pre-course questionnaire that he knew how to make friends - yet selected that he did not know how to make friends at post-course. I could infer that Robin became more aware of his skills and may have perceived the task of making friends as more difficult. This inference was supported by Robin's response in his post-course VAQ as he responded that he had been meeting people at his new job. Although he was meeting people, Robin may not have felt that he was making friends. Robin's overall SDS scores may have demonstrated a positive shift in Robin's perception of himself as being self-determined.

Across Subject Analysis of SDS

Overall, the two participants who had both pre-course and post-course scores, showed an increase in their Self-Determination Total Score, suggesting that the course may have had an overall impact on their self-determination.

Looking at Subdomain 2a: Interpersonal cognitive problem-solving, when asked to problem solve about hypothetical situations, two out of the three participants, Gene and Sherman, already appeared to have strengths in problem-solving. The slight decrease in scores from pre- to post-course SDS completion can be accounted for by loss of detail (which could be for any number of reasons such as feeling rushed, the writing occurring as too effortful), and cannot not reasonably be interpreted as a loss of problem-solving skills. The third participant Robin, had scores that showed an increase in his ability to problem solve in these hypothetical situations. Post-course, Robin was able to add in

statements to help connect the beginning and the ending of the social problem scenario that illustrated his ability to put himself into the scenario. Robin was the only one of the three participants whose responses in this subdomain showed a potentially meaningful increase in detail and quality. Although the *Epic Win* course focused on teaching problem-solving related to participant's own life situations, there was no practice helping others in the course to problem solve their challenges. Other than what might be picked up through listening to the coaching given to other participants, none of the participants were trained to problem solve hypothetical social situations and, in the course, they did not receive significant practice to learn how to successfully generalize what they learned about problem-solving for themselves to someone else's problems. Practice within the group in helping other participants solve problems may help make these skills more generalizable.

Looking at Subdomain 2b: Goal Setting and Task Performance, related to their own lives, showed an improved score for two of the three participants, Gene and Sherman, while Robin's score remained high at 100% pre- and post-course.

Based on the SDS, pre-course scores suggested that all three participants came into the course with some perception of themselves as being self-determined. Changes in scores from pre- to post-course demonstrated that perceptions did shift in a positive direction from pre- to post-course for the three participants, however, the meaningfulness of these changes in scores remains difficult to interpret.

Inter-observer Agreement of the SDS

Inter-observer agreement (IOA) was conducted by a fellow MA student on the SDS for all three participants pre- and post-course (see Appendix L). Agreement was

calculated between the observers on 10 different subdomain scores. The average IOA conducted for all six SDS assessments ranged from 80% to 100% with an average IOA of 90%.

Visioning and Action Questionnaire Analysis

Gene

Gene's pre-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. Gene's VAQ goals and actions for the work and career area of his life consisted of two goals. Gene was certain that he would become a fitness instructor, while at the same time, he saw himself in a heavy metal band at some point in his life. When asked to list any actions he had taken in the area of career, Gene was able to list three different actions that were all relevant to his goals. The first action listed related to his goal of being a fitness instructor, Gene had taken two Superfit classes over the past year. An action taken related to being a guitarist was that he had taken guitar lessons over the past few years. Gene also listed a third action, perhaps related to both goals; Gene took a leadership course the previous year. Looking at these goals and actions, it was evident that Gene had some ideas for a job or career – in at least two different areas of interest. It was notable that he did not indicate having taken any actions in the past month toward these goals, even though that was what the question asked.

Education. In the area of education, Gene stated that he would attend Niagara College for Health and Fitness Promotion and Recreational Therapy. Again, Gene had mentioned two related actions that he had taken over the past year – these included taking the two Superfit courses and the leadership course as previously mentioned. These

actions were also related to the goals in this area of life as they may have given him some knowledge in the area of health and fitness in order to help him succeed in the course at Niagara College. Clearly, Gene's work and education goals were directly connected.

Independence. Regarding goals and actions surrounding independence, Gene did have specific goals. Gene wanted to "*own a house, take care of everything and be who I am*" He also wanted to, "*go to a lot of metal concerts and festivals and be in a mosh pit.*" Gene's actions here were non-specific (i.e., he said he needed *"private time to think of my future plans*"). It was possible that having private time to think about future independence was the first action that he saw as being required in reaching this goal; alternately, Gene may not have known how to get into action around these independence goals.

Relationships. Gene did not specify any goals in the area of Relationship. Specifically, he had mentioned that he had not planned out any relationships, and as of yet, he could not think of any actions to be taken. It was possible that he inferred "relationships" to mean new friendships or romantic relationships.

Question 2: Support Systems.

Gene identified, "*my friends and family*" as support during his transition to adulthood, although no specific names or roles were identified.

***Question 3*: Problem Solving Skills.**

Gene stated that a problem he had recently was that he, "*had to do a lot of work in biology class*". When asked how the problem was handled, Gene had mentioned that he "*managed to get all of it done*". When asked if the problem was solved and if Gene would do anything different in the future, Gene stated, "*it did get solved*" and, "*I would do whatever it takes to solve the problems*". This response suggested confidence in his

ability to solve the problem, even if he was not spontaneously able to articulate how he solved the problem.

Question 4*: *Self- Awareness.

When asked about his diagnosis, what it meant to him, and his strengths and challenges during his transition into adulthood, Gene responded by saying,

> "*I have a little bit of Autism. I just see myself as a person somewhat different from others. My strengths are my knowledge and physical strengths I am able to understand a lot of things as well. Some of the challenges that I may need to face are that I may need to work hard in college and work hard when I get a job, but I'm totally confident that I'll be able to pull through these challenges.*"

Further, Gene was asked how he thought his diagnosis would impact his transition into adulthood and how it could be a strength during the transition. Gene reported,

> "*I'll just be able to work hard for money to buy my own place. I'll be able to live my life as a normal man, whatever normal is. I never really talk about my Autism. I just do whatever it takes to work, live in my own place and gain independence.*"

It was apparent that Gene had a general understanding of some of the strengths and challenges that he may encounter during his transition. One could infer that Gene had probably had sufficient experience of success to be confident that he really *could* succeed. It appeared that the major driving force for Gene was to be a "normal man" and to work hard to achieve his goals. He was not big on details as to how to get there; this

may have reflected an inability to work out the details on his own, or it may have just been verbally challenging for him to spontaneously generate a list of actions.

Gene's post-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. In the area of work and career, Gene specified that his goal involved being a personal trainer. As in the pre-course VAQ, under actions taken, Gene had mentioned again that he took the Superfit and leadership courses but also added that he would be taking the Fitness and Health program at Niagara College – Welland campus. There was no longer any mention of being a in a heavy metal band or taking guitar lessons in this area of life.

Education. Gene wrote the name of the program and the campus location for his goal, very similar to his goal written in the pre-course VAQ. In addition to the Superfit courses that Gene took as action to get him closer to his goal, he had also mentioned the following, "*I work out when I hit the weight room and have knowledge of weight lifting, aerobic and endurance training, etc."* In this area of life, Gene did not independently articulate or generate actions that would help him to achieve his goals in the area of education, but he was able to identify that he had some knowledge of the different types of training. It was clear that Gene's goal was consistent before and after the course, and he was able to reflect these interests in his vision for his life.

Independence. For goals in independence, Gene said, he would like to, "*get my own nice house and my own car with a big stereo and huge speakers.*" For actions taken in this area of life, Gene had mentioned that he had been making progress by making money since he delivers papers and would work in the summer and sometime later in the

future. These actions were related as they showed that Gene had the basic concept that it's going to take money to fulfill on his dreams, and having a job could help him to get money. It appeared that Gene was getting more concrete in his vision and more real about what it was going to take to achieve his goals, even if he couldn't articulate the details.

Relationships. For Gene's post-course VAQ goals in the area of relationships, he wrote, "*making new friends, I'm still friends with my old friends as well*". For actions taken, Gene said, "*I've got some newer friends and I got to know them more.*" Although it was not specified how or when he met these friends, it was very clear that friendship was important to him, and he was taking steps to meet new people and to expand his current circle of friends.

Question 2: Support Systems.

Gene did not specify any supports on the post-course questionnaire. It was possible that Gene was feeling unsupported or he missed this question as he had identified supports during the pre-course questionnaire and spoke of supports during the course.

***Question 3*: Problem Solving Skills.**

On the post-course questionnaire, Gene identified a problem that he had run into during the course: "*Finding the time to study for when I would get a driver's licence*". When asked how the problem was handled and whether it was solved, Gene said that,

> "*Throughout the summer I managed to find more time to look into my driver's handbook. The problem was solved.*" Gene added, "*I would just do the same thing and I would also try to find more time to look into my driver's handbook.*"

Question 4*: *Self- Awareness.

Similar to the pre-course questionnaire, when asked about his diagnosis and the strengths and limitations that Gene foresees during his transition, Gene answered,

> "*when I was five, I was diagnosed with a bit of Autism. It means I'm just the type of person that would think differently. I am able to get my schoolwork done and am able to participate in sports such as football. Some challenges I see are that there will be quite a lot of work for when I attend Niagara College in September and I believe that I will overcome these challenges by getting all my work done. I think my Autism as nothing since I'm the guy who would just do what I'm supposed to and get them done. I will be able to work and I will get my work done in college. I will be able to live independently.*"

Within subject analysis of the pre- and post-course VAQ.

In the first session of the course, when Gene filled out the pre-course VAQ, he had very clear and specific ideas about what he wanted out of life - he could see the bigger picture for himself. However, in the post-course VAQ, although many of Gene's goals and actions remained similar to the pre-course questionnaire, there were several notable shifts identified in the areas of independence, work/career and relationship. First, at post-course, we could still see his passion for music being represented as Gene had mentioned the importance that music played in his life, however reference to the heavy metal music shifted from the work/ career area to the area of independence. Later, the investigators found out via parent report, that all of his playing of guitar consisted of him playing the air guitar in his basement by himself. Perhaps, he now saw it more as a hobby

instead of a career. Second, in the area of independence, when asked about actions taken at pre-course, Gene spoke about his need to be alone and reflect on his future plans. One could argue that reflection was a very important part of the goal achievement process, however it did not appear that he had taken any actions that flowed from his reflection. Although Gene was certain about his goals, the actions were rather nebulous and there was nothing measurable around his actions.

At post-course, there was a shift in response. Gene became more concrete and action oriented as he described the progress that he had been making, delivering newspapers so that he could earn money. In a third example, Gene stated that he would like to own a car with a good sound system. The addition of the car was also new in his responses on the post-course VAQ. The addition of the car could have been due to the fact that having a car in our society can be a signifier of manhood or coming of age. As well, there were several points in the course where getting a driver's license was identified by others as a goal, which may have inspired Gene to want to do the same. It may have also meant that Gene had put more thought into his future career, and independence and may have determined that he wanted his own means of transportation so that he did not have to rely on others or on public transportation. Finally, in the area of relationship where no goals were present prior to the start of the course, Gene had begun thinking about what he would like in this area of his life. There had been some evolution in what he wants out of life, perhaps because he had been encouraged to think about something that he had not before the course. One of the biggest themes recurring in Gene's responses before and after the course, was his confidence in himself and his abilities to work hard to overcome obstacles.

Gene's writing patterns.

An analysis of Gene's writing patterns of his responses on the VAQ are summarized in Table 2 below. This table demonstrated Gene's ability to express himself fairly well in writing. His written responses captured the sense of confidence that he had in himself, his thoughtfulness about his future, and his willingness to reflect on his goals and actions.

Table 2.

Analysis of Gene's Writing Patterns

AREA OF FOCUS	PRE COURSE	POST COURSE
Writing Printed, Cursive or Typed?	Answers were all printed.	Answers were all printed.
Use of Box Space	Boxes were almost all filled top to bottom.	Boxes were almost all filled top to bottom.
Verb Tense	Future tense was used when discussing the goals. Past tense was used when discussing actions that had been taken.	Some boxes did not use a verb tense, and others appeared to use future tense, with some key words left out (e.g., Gene says, "being a personal trainer", and not, "I WILL be a personal trainer"). Past tense was used when discussing actions that had been taken.
Grammar and Spelling	Sentence form was good and grammar was used. Gene wrote in full and proper sentences.	Sentence form was good and grammar was used. Gene wrote in full and proper sentences.
Word Choice How many uses of the first person (I, my, me, mine, own, self)	15 uses of the word "I". There were also eight uses of the words "My/myself" or "my own".	13 uses of the word "I". There were also two uses of the words "My/myself" or "my own".

Sherman

Sherman's pre-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. Before the course, Sherman had 5 possible career interests laid out: working in a restaurant, working at a store, being an auctioneer, working at a clinic or hospital and finally, having or being part of a computing business. In the pre-course, when asked to describe the actions taken related to the goals, Sherman said, "*learning the education for my future career*". Sherman did not provide more information as to which of the 5 jobs he was referring and appeared that this was a general action that could refer to any of his career paths.

Education. There were three possible goals listed here, in point form: "*university, college, learning about genetic engineering*". Based on discussions with the participant during the course, it was safe to infer that he meant he would like to go to university or to college, in order to learn more about genetic engineering. Again in point form, Sherman shared some actions that he had taken related to his goals: he would like to "*learn more on my subjects and continuing to learn different subjects and improve on what is a struggle for me*". It was presumed that these actions were related to each other. He was learning more about his preferred subject so as to further his knowledge in his field. Mentioning that he was learning about other subjects suggested awareness that not all learning would be exactly in the identified area of genetic engineering. Based on conversations in the *Epic Win* course, "*and improve on what is a struggle for me*" could mean many things, for example, that he was working to improve study skills or

performance in certain subjects that were challenging, all of which would help him to succeed in college or university.

Independence. In the area of independence, when asked what was his five year goal, Sherman said, "*still living at my parents house, might move into an apartment if anything changes*." He did not explain what he meant by, "*move into an apartment if anything changes".* Through conversations with Sherman during the course, one could infer that, at pre-course, the possibility of living on his own seemed too remote. In the pre-course VAQ, the idea of living at home was stated more as a fact rather than as a goal and, given his current age, this was not surprising.

Relationships. Sherman wrote that he had no goals and specified no actions when it came to the area of relationships. Given what Sherman shared during the course, the investigator interpreted his response of "*none*" as meaning that he wanted to focus on his schooling instead of taking time to focus on relationships.

Question 2: Support Systems.

When asked about who supported him in achieving his goals, Sherman wrote, "*My friends, teachers and parents*". The individual's whose names were written in this question represented people that could likely support him at home but also individuals who could support him academically. Given that he was the only participant still in school, it was not surprising that he saw his teachers as supportive.

***Question 3*: Problem Solving Skills.**

Sherman clearly identified a problem that he had, "*the relationship I have with my younger siblings. They always fight over me using the computer and complain to my parents saying I've been on for a long time and using too much banwidth while they go*

on for either 2x-3x the amount of time I go on". Sherman also described how he handled the problem and what the ultimate solution was. Sherman reported, "*I said no when they wanted to use the computer and say that you have an Iphone and tablet, so use that when there is no computer available but they didn't listen. My parents put on time restrictions on the computers so they wouldn't be using it all day and not using all the banwidth in a week.*" Sherman was effective in describing the recent problem he encountered and he clearly identified the solution (which appeared to be a solution that was generated by his parents). Sherman would do the same thing again because, "*they don't complain when it is "my" time and they get to use it when it is "their" time*."

Question 4*: *Self- Awareness.

The post-course VAQ asked Sherman to discuss his diagnosis, and the strengths and challenges that he may have during his transition into adulthood – both those associated and those not associated with his diagnosis. Sherman stated,

> "*I have a diagnosis of HFA (High Functioning Autism) and what it means to me is I have a disorder that prevents me from learning and remembering important skills that people without a disorder could do easily. But I coop with it an improve everyday to get better at school. The education that I'm learning for my future career and job, and supportive teachers, family and friends to help me get to where I want to go in life*."

The VAQ prompted the question as to whether or not his diagnosis would impact his transition.

"*For my future career, they won't care wether or not I have HFA, they will only care if I do a excellent job for whome I work for. I will still have HFA going into adulthood, but that won't matter.*"

When asked about any foreseeable challenges, Sherman listed, "*The transcition towards indepence, away from family, finding a job and interviews for work.*" In this response, Sherman appeared to have a clear idea of challenges; however, some details were missing in the explanation. More specifically, when asked about whether or not there were strengths associated with his diagnosis, Sherman said, "*no, I will have it, but it won't matter if I have it or not*".

Sherman's post-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. After the course, the potential goals previously listed were no longer described, and a more specific idea was named: "*genetic engineer*". This was interesting to see, as it was not a career listed in the pre-course questionnaire. When asked to discuss actions, Sherman had mentioned actions that were directly linked to his goal. He had said that he wanted to, "*continue studying and learning about genetic engineering and how I can find future jobs with it*".

Education. Sherman provided one clear goal, "*to get into McMaster or McGill for an engineering course*". Sherman had chosen a goal that was more specific than what he had written pre-course by identifying which universities he might attend. When asked to describe actions taken that were related to his goal, Sherman wrote, "*get all my grades over 82% (which is going well)*", from which we could presume that some or all of his current grades were at an 82% or higher. This demonstrated Sherman's understanding

that grades matter for getting into universities of his choice and that he was motivated and in action to make this happen.

Independence. At post-course, Sherman had one goal listed in the area of independence. He said, "*I will (depending on where I go for university) rent an apartment to which share it with other roommates and we will all (hopefully) pay for living in it*." The actions taken, once again, sounded more like goals for the future, rather than identified actions that were taken in the last month, as per the instructions. For actions, Sherman stated, "*Finding nice apartments and cheap prices for when i have to live their for the next 4-6 years*." It was interesting to note the shift in focus and detail from the pre-course to the post-course questionnaire in that Sherman could then envision getting an apartment with friends when he goes away to school.

Relationships. In the post-course VAQ, Sherman was more specific and wrote, "*I don't have any plans for a relationship during university*". Under actions, he stated, "*studying*", perhaps meaning that he wanted to concentrate on his studies. It was possible that Sherman interpreted this question as referring to romantic relationships, as it was known from discussions during the course that he already had friendships.

Question 2: Support Systems.

Once again, Sherman was asked about who would make up his support team - who would assist him in achieving his goals. He responded by saying, " *my parents, grand-parents, relatives, teachers and myself. My parents helping me with work i didn't understand. (They will hopefully will help me financial during university)*." Here, Sherman provided more detail when listing his supports. Additionally, Sherman also identified how some of these individuals were able to support him.

Question 3*: *Problem Solving Skills.

Sherman's response to the post-course VAQ demonstrated that he had experienced and identified few problems during the past month. Sherman responded, "*I haven't had really many problems in the last month, but mostly having a few problems with physics and biology.*" When asked how the situation was handled and whether or not it was solved, Sherman had mentioned, "*I am getting help with physics and a bit of biology when I don't understand something or just asking questions in greenroom*." Although it was unclear what he meant by "greenroom", Sherman was able to ask for the help he needed to solve his problems. It was interesting to note, when asked whether the problem was solved or avoided, Sherman wrote, "*I wouldn't say avoided, but a lot was solved for me though.*" Sherman was also able to identify some alternative solutions to this problem. Sherman said, "*Reviewing my notes and try practicing them before doing the new stuff, if i still don't understand then I will ask my teacher for help*." This demonstrated Sherman's ability to take initiative. He was focused and determined to reach his academic goals, and knew who he could go to for support if he needed assistance with questions he did not understand.

Question 4*: *Self- Awareness.

Sherman was able to explain his diagnosis and what it meant to him rather clearly. First, he was asked to describe whether or not he had a diagnosis, and what it meant to him. Next, Sherman was asked about his foreseeable strengths and challenges as he approaches his transition into adulthood. Finally, he was asked about how he saw his diagnosis impacting on his transition. His responses were as follows:

"*Yes I do, HFA (High Functioning Autism). What HFA means to me is a few things. A few good things and bad things that I have is verbal and social issues, my processing skills are quite good (not many others are just as lucky), I can't function as a "Normal" person would, etc. What i see going through to adulthood with hr advantages i have right now is that i have a job, i can have a well balance of money so i can sustain myself with money, having learned plenty of social skills i can make proper conversations and a well understanding of how to manage to run an organized life ahead life. Defiantly starting to be more independent within living and school itself. I think it won't really matter if my HFA will affect me during my transition into adulthood, but something may happen, i really wouldn't know until until something would start. With HFA, I will have plenty of help during high school, but during university, i really don't think they would even care if i had HFA or not, I'm still a student (or worker) at their facilities*."

Sherman's responses to these questions demonstrated a high level of self-awareness. He was able to clearly articulate what his diagnosis meant to him. When discussing his strengths for his transition into adulthood, Sherman did not really describe himself using characteristics, but described his current situation (i.e., he had a job and money). It was also encouraging to see that he did not see his diagnosis as something that would interfere with his future jobs, but rather, teachers and employers would just see him as an individual with his own unique strengths. He also recognized that, until he was in these situations, he could not really predict the kind of challenges he might experience.

Within subject analysis of the pre- and post-course VAQ.

Despite having been only half way through high school and 15 years old, Sherman came into the first *Epic Win* session with an idea of what he wanted out of life. He also had some idea of his interests and his strengths. Sherman's goal setting became more specific in most areas, post-course. Specifically, the theme of becoming a genetic engineer was not present in the pre-course questionnaire, but was connected to each area of life in the post-course questionnaire, showing Sherman's high focus on career attainment. Also, it was interesting that he was consistent pre- and post- course in not having goals or actions in the areas of relationships - one could infer that relationships were not as important as his education and career goals. It was possible that Sherman may have equated "relationships" with having romantic relationships, as he reported to already have stable friendships. Also, because he was highly focused on success in school, he may have seen relationships as potentially interfering.

Sherman's writing patterns.

An analysis of Sherman's writing patterns that was created from his responses on the VAQ was summarized below in Table 3. Sherman's responses had become more clear and he was more specific in his responses. Most of Sherman's responses saw a shift in his verb tense. His responses moved from being present-oriented to being future-oriented. It was also noted that in his responses, Sherman increased his use of the word "*I*", which may have suggested greater ownership of his future and actions to be taken.

Table 3.

Analysis of Sherman's Writing Patterns

AREA OF FOCUS	PRE COURSE	POST COURSE
Writing Printed, Cursive or Typed?	Answers were printed.	Answers were all typed.
Use of Box Space	Responses were fairly short and ranged from one line to about half of the box. Some answers were point form and used bullet points.	Some responses were short and consisted of one or a couple words. Other responses were provided and were written in a full sentence.
Verb Tense	Just over half of the responses included verbs, and they were written in the present tense.	Responses were not full sentences, however, they appeared to be written mostly in future tense.
Grammar and Spelling	There were some minor spelling errors, and basic grammar, such as a period was used. Sentences were not complete.	There were no spelling errors, however some sentences did not flow due to improper word use or word omission.
Word Choice How many uses of the first person (I, my, me, mine, own, self)	Zero uses of the word "I". However, there were four uses of the word "My", and one use of the word "Me".	Five uses of the word "I". There was one use of the word "My".

Robin

Robin's pre-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. In this area of life, Robin listed one goal: "*beginner voice actor*", which could be interpreted to mean that he wanted to be a voice actor. In terms of actions, Robin specified, "*voice classes*", which could mean that he was looking into

classes or that he was already enrolled in voice classes. Robin was able to identify an action that was closely related to his goal and would support him in becoming a voice actor.

Education. In the education area of life, Robin simply stated his goal as, "*voice classes"*. For actions related to this goal, Robin wrote that he would "*research and practice voices*", which, after getting to know Robin during the course, one could infer that he was going to research voices that he wanted to learn to mimic and practice those different voices. He may have also researched courses or jobs that were related to voice acting.

Independence. Robin had a goal listed in his independence area of life: "*living in a small apartment*". His actions listed in this area of life were, "*get job, save up*". Although responses were vague, this answer demonstrated a mature understanding that he needed to make money and save up so that he could afford to live in an apartment.

Relationships. When it came to goals in the area of relationships, Robin had listed his parents and his coworkers; however, he did not state a goal. One could assume a goal would be that he wanted to improve or maintain the relationships he had with his parents and others. Actions that were listed by Robin included: e-mail, Facebook and Skype. It was likely that these were the ways that he was currently keeping in touch with his parents, given that he lived far away at his grandmother's home.

Question 2: Support Systems.

Robin identified three different people or groups of people as those who would support him in achieving his goals, "*Mom, Dad, Friends*". The individuals listed here were people who may provide great support to him at home in various ways (i.e.,

emotionally, financially etc.). Robin did not list his grandmother, with whom he lives, or anyone outside of his inner circle (e.g., college teachers, community workers, etc.) who may provide additional academic support, or support in the larger community.

Question 3*: *Problem Solving Skills.

When Robin was asked about a recent problem and how he handled it, Robin explained, "*last month I got withdrawn from the acting program from ____ College. I joined different course to get my two-year diploma and went to get help from EA.*" Robin also added, "*Yes it did get solved*" and that in the future, "*I would probably do something similar*".

Question 4*: *Self- Awareness.

Robin was able to clearly talk about his diagnosis. He said that, "*I have a mild-levelled Autism which means that I'm still well developed.*" When asked about his strengths during his transition into adulthood, Robin listed three strengths, "independency, organized, adaptable". Robin was also able to identify challenges that he foresaw for himself, "*making my own decisions, staying focused, understanding everything around me*". Next, Robin was asked to talk about how his diagnosis might impact his transition into adulthood and how his diagnosis could be a strength during this time. Robin said, respectively, "*it may lead to live on my own without relying on my family for help*" and, "*opens my mind to many possible ways*". Through Robin's responses, one could infer that he had a strong view of himself as open to change and growth.

Robin's post-course VAQ responses.

Question 1: Goals and Actions.

Work and Career. In the post-course VAQ, Robin's goals were written with enough detail to know what it was that Robin wanted. Robin wrote that he wanted to, "*work as a voice actor*". There was an increase in actions taken for Robin in the post-course. The detail in the way the actions were written also improved. Robin had mentioned that he had looked over the internet to find more information. He had also contacted individuals that he went to school with to see whether or not they had any leads. It was interesting to note that in a follow up phone conversation with Robin's dad (and as mentioned in Robin's post-course VAQ in the relationship area of life), we found out that Robin had begun a new job working in a factory. He did not talk about the new job in this area of life - perhaps because it was not a voice-acting job.

Education. In the post-course, Robin's goals were more clear and detailed than in his pre-course response. Robin wrote that he wanted to, "*take a course that is on once a week for 5 weeks to become better at voice acting, the course is in Toronto*". The actions listed in the post-course VAQ were also more detailed: he wrote that he had found the site on the internet and now he just had to sign up for the courses, which suggested that Robin had put more thought and effort into his goals and the actions he was taking post-course.

Independence. There were two goals listed for this area of life. Robin wanted to be living in Burbank, CA., and have his own apartment. Robin added more details to his original goal, therefore making it a more specific goal than it was originally. There were no actions listed, Robin wrote, "nothing yet".

Relationships. In the relationship area of life in the post-course VAQ, Robin listed two goals: he would like to meet friends and keep in touch with old friends and family from home, which was consistent with his pre-course VAQ. Robin's response in the pre-course questionnaire listed people, presumably people with whom he had or wanted relationships. More detail was provided in the goals written in the post-course VAQ. Although the number of actions was less in the post-course, they did become more detailed in the post-course VAQ. Robin stated that he had met new people at the job that he started shortly after finishing the *Epic Win* course.

Question 2: Support Systems.

In his post-course response, Robin shifted his answer from his "*mom, dad and friend*s", to, "*my Parents, my friend Drew*", a slightly more specific response.

***Question 3*: Problem Solving Skills.**

Robin identified a problem that he was experiencing during the time of the course and he clearly explained how he handled the problem. Robin wrote,

> "*I was getting phone calls back about jobs and I was very nervous talking to the people. I worked with my dad and we practiced questions that were going to be asked so I felt more comfortable talking to the people.*"

Robin had mentioned that the problem was solved, "*Yes I got a job*" and in the future when asked what he would do, Robin stated that he would do, "*probably the same thing*".

***Question 4*: Self- Awareness.**

In contrast to the pre-course, Robin was clearer and more optimistic in his response when he identified that,

"*yes I have a diagnosis, it means that I know I have Autism but it does not make me who I am. I am a very reliable person that wants to do well and get a job and have an apartment.*"

Robin added that some of the challenges that he foresees for himself are, "*being nervous and shy at first when I meet people*." More specifically, Robin also listed challenges that were related to his diagnosis, "*it may slow me down and it may take longer than I think I want it to take*." Finally, Robin was asked how his diagnosis could be a strength during his transition. Robin said, "*yes as I want to succeed and do better so it makes me more creative for my story writing and voice acting.*"

Within subject analysis of the pre- and post-course VAQ.

Coming into this course, Robin had already begun his transition from high school into his post secondary endeavours. He had some idea of his strengths and an idea of some skills that he had yet to develop. It appeared that Robin had provided more detail and clarity to his goals and actions on his post-course VAQ. This could be a result of Robin having thought more about his goals and actions throughout the *Epic Win* course, or he may have felt more comfortable writing more in the post-course VAQ because he responded over the computer and did not have to hand write.

Robin's writing patterns.

An analysis of Robin's writing patterns was described in Table 4 below. This was an analysis of his writing patterns from his responses on the VAQ. As described above, Robin handwrote his responses in the pre-course assessment, and responded over the computer at post-course. The difference and inconsistency in the way he filled out the questionnaire could be a limitation to this evaluation – but it may have also allowed him

the opportunity to share his goals and actions in a way he had not been able to do before (if he had to hand write the responses again in the post-course). This observation was something that future researchers would want to consider, perhaps offering paper and online versions of assessments to maximize ease of responding. This pattern may have also suggested that handwriting was more difficult for Robin and that written language was not his strength, despite his good verbal skills during the group. Robin also tended to write responses that were short and to the point - making it difficult to infer.

Table 4.

Analysis of Robin's Writing Patterns

AREA OF FOCUS	PRE COURSE	POST COURSE
Writing Printed, Cursive or Typed?	Answers were printed.	Answers were all typed.
Use of Box Space	Responses were very short and ranged from one line to about half of the box. All answers were point form and were written using one or two words.	Responses were fairly short and ranged from one line to about half of the box. Some answers were point form and used bullet points.
Verb Tense	There were only two points (one goal and one action) that used a verb, and they were in the present tense.	The goals were described using both present and future tenses. The past tense was used when discussing actions that have been taken.
Grammar and Spelling	Spelling was good but the grammar was non-existent. Answers were not written in full sentences and grammar was not used.	Basic grammar was used but most sentences were not complete sentences. Robin used proper spelling.
Word Choice How many uses of the first person (I, my, me, mine, own, self)	Zero uses of the word "I". There was one use of the word "My".	Two uses of the word "I". There were also zero uses of the words "My/myself" or "my own".

Across Subject Analysis of VAQ

Overall, all three participants showed that they had some ideas of what they wanted in the future in the areas of: education, work/ career, independence and relationships. The participants were able to express these goals and listed some of the actions that they had taken to help them get closer to achieving their goals. Their goals were consistent with those of their same aged peers. In the area of career/ work, the

participants expressed that they wanted jobs in their related fields, representing their interests. Both Gene and Sherman had interests that could be seen in their responses in various areas of life. For example, Gene's interest in music could be seen through his desire to be in a heavy metal band, and through his goal of being in a mosh pit. Some of these goals did shift in their post-course responses. Returning to Gene's interest in music, he no longer had a goal of being in a heavy metal band, but he did have a goal of owning a car with big speakers and a good sound system. Next, in the area of continuing education, both Gene and Sherman specified that they would like to attend either college or university. Robin did not state that this was his goal however; he did specify that he wanted to take voice-acting classes and he was already attending college. In the area of independence, all three participants spoke about living away from their parents by either renting or owning a place by themselves, or with friends. Finally, in the area of relationships, both Gene and Sherman expressed that they had no goals in this area of life, or that they had not yet thought about it in their pre-course response. Robin on the other hand, had listed people, but no clear goal was specified. In the post-course responses, both Gene and Robin stated that they wanted to meet new friends. Sherman specified that he did not have plans for any relationships during university. These goals were fairly similar to those of their typically developing peers.

It was also noted when analyzing this data, that from pre-course to post-course, the participant's goals became more detailed and more specific. There was evidence that the young adult's interests were still reflected throughout their responses after the course, but in a more refined and realistic manner. This was exemplified through Gene's heavy metal example described above.

CHAPTER 4

Discussion

The purpose of this study was to describe the engagement of three participants from the *Epic Win* course with two protocols to measure self-determination. Using a comparative case study design involving descriptive and interpretive analysis, this MA thesis explored the impact of the *My Life as an Epic Win* course on perceived self-determination for three young adults with HFASD. A qualitative within and across participant analysis of the two pre- and post-course measures, the SDS and the VAQ, was completed. By chance, these three participants appeared to represent three different points in the continuum of transition to adulthood. Sherman was the youngest participant of the group who was in grade 10 at high school and had big goals of going to college or university. Gene had completed high school the year before and was looking at college options. Robin was already enrolled and engaged in college life. Through the analysis of archival data on these three participants, one primary research question was examined and three additional post hoc research questions emerged. In addition to the case study analysis, a procedural analysis was conducted with post hoc research questions stemming from it, leading to recommendations on how the course could be improved to enhance future participants' acquisition of self-determined behaviours. As well, this procedural analysis identified ways to improve the evaluation component to ensure the collection of complete and meaningful data sets for all participants.

Research Question

Do older teens and young adults who complete the *Epic Win* course show improved self-determination as measured by:

a) Increases in pre- and post-course assessment scores on the SDS (looking at the SDS Total Score and scores of Subdomain 2: Self- Regulation).

Overall, all three participants showed an increasing trend in their Self-Determination Total Score, suggesting that the course may have had some impact on their self-determination. Analysis of individual responses from these three participants suggested that most improvements in SDS scores could be attributed to improvements in the clarity of responses, not necessarily significant content changes. Slight differences in wording or the addition or subtraction of minor detail did, at times, result in a higher or lower score. Most important, it was noted that participants did not begin the course with low Self-Determination Total Scores. In fact, one participant demonstrated a fairly high pre-course score. Despite the fact that these young people with HFASD started the *Epic Win* course with a moderate to high level of self-determination, it appeared that, through activities, discussion and practice, they were able to refine their ability to respond to questions related to self-determination by the end of the course.

b) Increases in self-determined behaviours as measured by the VAQ through a pre- and post-course qualitative analysis of goal setting, goal attainment and problem-solving.

There was a shift in the participants' VAQ responses before and after the course. However, in interpreting these results, it was difficult to decipher whether or not the increase in self-determination was at all due to participation in the *Epic Win* course. What

was evident was that, before the course started, all three participants demonstrated that they had some ideas about what they wanted in the future in the four areas of life explored in this program. The participants identified goals and listed actions that they had taken to help them get closer to achieving their goals. It was also noted that their pre- and post-course goals were consistent with those of their same aged typical peers (e.g., they want a post secondary education, a car, to live on their own or with friends). When analyzing this data, from pre-course to post-course, the participants' goals became more vivid. Although there was consistency in their interests before and after the course, after the course their responses were more elaborate, refined and realistic.

Post Hoc Research Questions

Having had participated in five *Epic Win* courses before completing this analysis of the archival data from the fifth delivery of the program, three questions arose for the principal student investigator. Each of these questions were connected to improved quality and usefulness of this research in understanding self-determination in this population.

Research Question 1: What were our assumptions about self-determination in young adults with HFASD and how did our assumptions shape the design and evaluation of the program?

It was assumed that individuals with HFASD, prior to the course would not be self-determined. For that reason, we were coming at this course from a deficit point of view, that was, assuming self-determined behaviours were lacking and, thus, had to be taught. Therefore, it was believed that by taking the *Epic Win* course, the participants would see growth in their self-determination. However, after reviewing the participants'

questionnaires, it became clear that this was not the case and that some of these self-determined behaviours were relative strengths for participants.

These three participants actually came into the program with the majority of their SDS subscale scores falling in the moderate to high levels of self-determination. As well, they provided thorough answers on the VAQ. Therefore, it could be inferred that overall self-determination was relatively strong in these individuals. In future *Epic Win* courses, it may be possible to use the pre-course SDS as a way to learn more about the participants and pinpoint their strengths. Coming from a strength-based intervention model, the investigators could really target and build on these strengths, instead of focusing on challenges. Often, it was thought that individuals with ASD were narrow in focus, fixed in their thinking and closed-minded, but all three subjects showed the opposite. For example, it was found that two of the three participants had strengths in problem-solving but had difficulties when it came to problem-solving hypothetical scenarios from the SDS. The SDS questions were worded in a format not at all familiar to participants (i.e., they were given a problem, then an outcome, and asked to fill in what actions the protagonist could take to cause the stated outcome). Perhaps having more opportunities to practice active listening and problem-solving throughout the course could have improved this skill. One way to accomplish this could have been to promote growth in perspective taking through learning to listen to others, and work with others in solving their problems. By listening to their peers and helping them to solve problems, the participants would receive additional practice on solving problems other than their own, which could have encouraged them to put themselves in someone else's shoes and provided them training with additional exemplars.

That being said, it was also evident during the course that many of these individuals still faced barriers that could interfere with or slow them down in achieving their life goals. These factors may include: poor relationships with others (e.g., family, friends, coworkers, or other support people), resource limitations (e.g., lack of money for higher education; fewer jobs available to individuals with HFASD), lack of confidence in themselves to take chances and do things they would not typically do, or lack of practice in taking action on their own behalf without full support and coaxing from parents or others.

In summary, our assumptions about the self-determination of these three individuals with HFASD as being low appeared to be inaccurate. It was found that these three individuals were self-determined (based on the SDS responses), to the extent that they each had a vision for their future and knew some actions to fulfill on their visions (based on VAQ responses). What appeared to be lacking for these individuals was the ability to actually get into action, problem solve, and stay in action around their goals. Despite our intention to design the *Epic Win* course from a strength-based perspective, our faulty assumption that self-determination needed to be taught led to a focus on teaching a full range of self-determined behaviours. What may have been more effective was a more focused approach of identifying and teaching individualized target behaviours that would help participants overcome barriers to being in action. Future delivery of this program should consider increased practice of those specific self-determined behaviours that would lead directly to goal attainment.

Research Question 2: How did the design and delivery of the course impact on the outcomes for these three participants? Based on that, what changes to the design and delivery of the program could lead to improved outcomes?

This post hoc research question addressed the following three limitations of the course (a) course duration impact on self-determined behaviours, (b) administration of the evaluation tools, and finally (c) the ongoing measure of skill acquisition during course delivery. Understanding these limitations and their impact will play a critical role in the development and delivery of future *Epic Win* courses.

Limitations of course duration.

Although a 10-week course was a manageable amount of time for many families to commit, the duration of the course was a major limitation in that we were trying to fit in too much information and instruction within that time frame. Other previously researched programs that promote self-determination typically took place over the course of an academic year (Wehmeyer et al., 2013). The 10 weeks allocated for the *Epic Win* course did not allow adequate practice of the target skills. The first three weeks of the course focused on awareness training about ASD diagnosis and helped participants identify goals and possible challenges they foresaw related to their transition into adulthood. The final two weeks of the course were dedicated to consolidating course concepts and strategies, creating *Epic Life* videos, and in the final week, celebrating their accomplishments and watching their *Epic Life* videos. This left only five weeks in the middle to introduce and practice the self-determined behaviours across the four domains of life. As a result, there was a narrow range of exemplars provided and insufficient practice with most skills, leading to limited ability to generalize and apply what they

learned to their life and to post-course questionnaires assessing self-determination. For example, during the course when learning about problem-solving, the participants were asked to identify problems they were facing. One person each week (over 4 weeks) was supported in using a problem-solving model to generate possible solutions for their problem. After that individual was coached through their problem and helped to generate solutions, all participants were then encouraged to choose a problem they wanted to solve, ensuring that they would each pick problems that were meaningful to them. Over four weeks, starting at week 5, participants worked one-on-one or in dyads with an MA student facilitator to solve the problems they presented in the different domains of life. By limiting the focus to their own problems, participants were not exposed to a diverse range of problems. As well, by not having more opportunities to listen and practice helping peers to find solutions to their problems, they did not get practice in taking the perspectives of others and putting themselves in another person's place within a problem scenario. Without this kind of practice, it was not surprising that they did not improve in their ability to solve the hypothetical problems posed on the SDS.

Given that many individuals with ASD may have difficulties in generalizing skills from one learning context to another, future courses should provide weekly practice in helping other participants to solve a diverse range of problems. A similar emphasis on practice will be needed for the other target skills of goal setting, action planning and action attainment. Therefore, the 10-weeks allotted was insufficient for participants to develop any fluency in using these skills.

Limitations in the administration of the evaluation tools.

In the administration of the evaluation tools, there were considerable challenges that negatively impacted our ability to meaningfully analyze the data. These challenges can be summarized in the following three points.

First, when administering the evaluation tools, there was insufficient instruction and support to participants as well as insufficient checking of submitted questionnaires to ensure thorough completion and understanding of the questions. During the first session, we reviewed the tools quickly with the group and gave an instruction such as, "please take home these questionnaires and fill them out and bring them back to the next session. If you have any questions feel free to send us an email or call and we could explain it further". A couple different problems arose from this protocol. Participants did not return the questionnaires or they returned incomplete questionnaires. For some participants, whole subdomains of the SDS were not completed at all; for a couple others, the second page of the VAQ was not completed at all. This led to incomplete data sets for five out of the eight participants, ruling out the possibility of any group analysis of data. It was also possible that, for those questionnaires that were fully completed, participants might have responded without having truly understood each question. For example, on the VAQ where participants were asked to list actions taken in the past month, the instructions were specific regarding a time frame; however, the participants did not seem to get this (e.g., they described actions taken that were outside of the time frame of one month). Had the facilitators been available for the completion of the questionnaires and review of the responses in the moment, it would have been more likely that the participants would have asked questions, or that the facilitators would have noticed incompletions and provided further prompting for completion.

Secondly, there was variability in the conditions under which the questionnaires were filled out. Parents were instructed to support their young adults in filling out the questionnaires, however they were asked not to respond for them. Given that there was no control over the administration of questionnaires, the conditions under which participants completed the questionnaires were unknown. It was likely that these conditions were inconsistent as the questionnaires were filled out at home (e.g., participants may have felt rushed, bored or otherwise motivated to move on to more preferred activities). An example of an inconsistency that was documented involved Robin who completed the pre-course questionnaires by hand. At post-course, Robin lost his VAQ and had moved out of the area. He was e-mailed both VAQ and SDS questionnaires. It took him two months from the course ending to return the questionnaires electronically. The SDS had been printed out, answered through written response, and then scanned and emailed back to the investigators. In contrast, the post-course VAQ was sent to Robin in a word document. Robin opened the file, responded in the document, saved it and e-mailed it back to the investigators with the scanned SDS. In reviewing his post-course responses, it appeared that Robin had provided more detail and clarity to his goals and actions on his post-course VAQ, leaving us wondering if handwriting challenges got in the way of providing a fuller response at pre-course and on the post-course SDS. Given the variability in the administration, it was much more difficult to meaningfully interpret changes in responding from pre- to post-course.

The final limitation related to administration of the evaluation tools was that of structure for the retrieval of completed questionnaires. Our lack of consistent structure, coupled with the organizational challenges often seen in individuals with ASD and

sometimes in their family members, added to the problem of incomplete data sets. To highlight one case in particular, at post-course, Sherman required multiple phone and internet contacts as well as the re-sending of the questionnaire, which led to significant delay in receiving post-course results. These responses were finally provided in September 2014, whereas other participants from the same course had completed the questionnaires in May to July 2014 (shortly after the course completion).

Design and delivery of future *Epic Win* courses.

The following three recommendations are derived from the analysis of the limitations above and must be considered prior to future research on the *Epic Win* course.

Extending course duration allowing for more practice of self-determined behaviours: Adjusting the program to a 12 week course would allow for additional time to practice the core skills of goal setting, action planning and problem-solving and allow participants to become more fluid in the use of these skills. With two additional weeks, participants would have more time to rehearse these skills using multiple exemplars from each of their lives, receive more coaching from the facilitators, and learn vicariously by listening to their peers setting goals, solving problems and taking actions. Given increased practice with diverse examples, we could more realistically expect participants to generalize these skills to the problems presented in the measurement tools and to their own problems after the course completes.

Facilitated session to complete questionnaires: Consideration of the limitations related to the administration of the questionnaires had led to the following two recommendations for future deliveries of the *Epic Win* course. First, a recommendation that promotes consistency would be to arrange a time for participants to fill out the

questionnaires pre- and post-course with a facilitator present to answer questions and collect the questionnaires. This would increase certainty that assessment tools were filled out completely and to the best of participants' abilities. Second, facilitators could give participants the choice of completing the questionnaires on the computer of one of the investigators or using a paper copy. Given the motor challenges of some individuals with HFASD, it is important that they have the choice on how to fill out the questionnaires so as to encourage optimal and fuller responses.

Peer Facilitation: For some applications of the *Epic Win* course, including the course from which these three participants came, there was a peer facilitator who offered support and guidance to the participants by sharing the story of his transition into adulthood, as well as sharing resources that he found useful. The peer facilitator shared specific examples in all four areas of life and helped coach participants during practice of the self-determined behaviours. The feedback from participants and parents around the inclusion of a peer facilitator was quite positive. In the future we would want to continue involvement of a peer facilitator, which could be someone who had graduated from the *Epic Win* course, to share outcomes, strategies and demonstrate how they used the skills taught in continuing to make gains and achieve other goals related to transition into adulthood.

Research Question 3: How did the choice of evaluation tools and methods impact on the kind of results that we were able to analyze? Is there a way to evaluate the *Epic Win* course that would be more relevant and valid?

This research question will address limitations in the evaluation tools as well as the limitations in methods of assessing and tracking skill acquisition.

Limitations of the Evaluation Tools.

The Arc's Self-Determination Scale (SDS).

In this section, three limitations of the SDS as an assessment of self-determination in transition-age youth with ASD will be discussed. Following that the advantages of finding or creating a new assessment tool to measure self-determination in this high functioning population will be explored.

Problem Solving: In the *Epic Win* course, participants were not trained to look at problem-solving in the way that it was framed in the SDS, Subdomain 2: Self regulation - Interpersonal Cognitive Problem Solving. Although we would not want to train participants "to the test", the fact was that the SDS problem-solving questions appeared to be worded for people with intact perspective taking and required participants to be able to put themselves into another's situation, which may be too challenging for some people with ASD. Because of this, use of the SDS Subdomain 2 as a measure of problem-solving may limit our ability to effectively measure meaningful change in the participants' problem-solving skills from pre- to post-course.

Questionnaire Wording: A second limitation of the SDS was the wording of questions in some Domains. For example, in Domain 3, the forced choice questions provide two opposite responses, such as, "I am able to work with others" versus, "I cannot work well with others". Forced choice questions do not give much option for responding and would encourage black and white thinking in individuals who are already inclined to think that way. A similar question written on a Likert scale may better reflect the true range of responses. As another example of wording challenges, in Domain 4, some of the questions appear to have confusing language. For example, "I don't accept

my own limitations". Although this phrase makes grammatical sense, it could cause confusion for the respondents. Removing potentially confusing language or, once again, providing a Likert scale so that responses are not so black and white may be needed. The limitations of the SDS may have impacted the participants' interpretation of questionnaire items, and thus negatively influenced their responses and subsequent scores.

Lack of sensitivity of the SDS. The SDS may be too broad a measure to capture small but meaningful gains in skills taught in this 10-week course. There was no research to suggest participants of any ability level could make significant improvements on the SDS over a short period of time. The self-determination research to date focused on people with ID and LD and provided evidence for their progress over one or more academic years (Wehmeyer et al., 2013). Therefore, it may be unreasonable to expect significant gains on the SDS for this *Epic Win* course.

Given the potential challenges in completing the SDS, it was not surprising that only three participants completed both the pre- and post-course SDS. It was likely that the SDS was too challenging or too taxing for some individuals with ASD to complete.

Future research could investigate tools that may be better suited for this short program and for this population. One option to consider would be another standardized measure of self-determination, the AIR Self-Determination Scale - Student Form (AIR-S). The content of this scale was closely related to what was learned in the course (e.g., questions are based on goals, actions and support systems). The items on the AIR-S are mostly Likert scale format, with some short response questions also included. In Wehmeyer and colleagues' (2013) study involving 371 participants with ID and LD, both

the AIR-S and the SDS were used in evaluating self-determination over a three-year period. For both tools, small but statistically significant gains were demonstrated, suggesting the AIR-S was a useful measure. A second option to consider would be for the researchers to develop their own measure of self-determination. By doing this, the measurement tool could be designed to more effectively measure the specific self-determined behaviours taught in the *Epic Win* course. A new measurement tools for self-determination could also include measurement of variables that traditionally see poor outcomes for young adults with HFASD, including, but are not limited to: employment, higher education success, anxiety, depression and self-esteem.

Visioning and Action Questionnaire (VAQ).

The VAQ was designed by the investigators as a pre- and post-course measure with the intention to give the participants a chance to demonstrate what it was they learned through the course. The questions were designed to cover each of the main skills that were being taught throughout the course and worded in a way that would be both familiar and simple to those filling it out. There appeared to be two ways in which the VAQ presented limitations. First, it was limiting in terms of how the questions were worded, and second, it was limiting due to the fact that the interpretation of the participants' responses were subjective and was based on external perspective. These limitations are explained below.

Wording of VAQ. In taking a closer look at the VAQ, most of the questions were phrased in a way that prompted participants to respond with single phrases and in some cases one-word answers, thus not providing participants' the opportunity to elaborate on what they had learned in the course. The following examples are provided to

demonstrate how questionnaire wording played a limiting role on (a) how we could analyze the data, (b) how the wording may have caused some confusion for participants, and (c) how the wording of the questions may have limited the participants in their ability to display the skills they learned throughout the course.

First, in question 1 on the pre-course VAQ, when asked "What is your 5 year goal and what actions taken in the area of relationships", Sherman provided a cursory response of, "*None"* and at post-course, wrote, "*Studying*". In question 3, the wording of the question did not pull out a detailed response, but rather a non-descriptive, sometimes one-word answer. Participants were never really asked to describe the steps they would take to solve a problem. By saying "How did you handle the problem?" we left participants open to giving vague responses. On the pre-course, Gene response was, "*I managed to get all of it done*". Had the question read, "What actions did you take to solve this problem?" a more detailed response may have been elicited. Gene also responded to a follow up question that asked, "If you had to deal with the problem again, would you do the same thing or something different", by saying, "*I would do whatever it takes to solve the problems*". In question 4, which referred to self-awareness about the individual's disability, the presentation of the question was too open and did not yield vivid responses. It was also difficult to determine how realistic the goals were for the participants. For example, in the area of work and career for Gene, the goal of becoming a rock star may not have been realistic, given that, at that time, he was already 20 and had yet to become proficient in playing any instrument (beyond a few guitar lessons) or to get involved in the music scene. Perhaps by administering the VAQ orally, or using the written VAQ as a springboard to generate questions for a post-course follow-up interview, we could have

gone deeper into the meaning and significance of goals and actions the participants did identify.

The next challenge stemming from the wording of the questions on the VAQ was that the questions were not clear enough and it appeared as though the participants did not fully understand the questions. Without the presence of facilitators for support and guidance and to respond to questions about the questionnaires, not all participants responded with the expected feedback. For example, when the participants were asked to talk about their individual strengths and challenges that would help or hinder them during their transition into adulthood, Sherman responded by talking about the education that he would need for his future career (as being a strength) and the transition towards independence (as being a challenge). When he was asked more specifically about how his ASD would be a strength in his transition, he said, "*No, I will have it, but it won't matter if I have it or not*". Had the VAQ asked a question such as, "Give me a specific example of how having this diagnosis has helped or hindered your achievement of your goals?" there may have been more detailed and accurate responses. If interviews were conducted as follow up to the VAQ, fuller responses could have been encouraged and these responses would have allowed for a more detailed and deeper analysis.

Finally, it was expected that participants would demonstrate their new skills in creating SMART goals as practiced during the course. However, that did not happen. In fact, the written responses were general both at pre- and post-course for all three participants. Had the wording explicitly requested SMART goals format, their responses might have been more specific, measureable, achievable, relevant and time-bound. For two of three participants, despite not writing the SMART goals as rehearsed in class,

there was still more detail than at post-course to assist the reader in knowing what it was that they wanted. For example, Robin had written, in the pre-course, "*research and practice voices*". Approximately three months later on his post-course this expanded to, "*Want to take a course that is on once a week for 5 weeks to become better at voice acting, the course is in Toronto*". The latter response was more specific and measureable than the first goal, and it was stated with a specific time frame.

Analyses of Responses were Subjective. The second way that the VAQ was limiting was that the interpretation of VAQ responses were based on external perspective (i.e., looking for measurable course outcomes based on skills we were teaching) versus internal perspective (i.e., participant's internal consistency in responding or shifts toward a more elaborate, precise and/or "realistic" goals and with a clearer more vivid description of actions). While a supplemental interview could help us become more clear on participants' responses, and could help us to see if there were meaningful changes from pre- to post-course in the skill areas that were the focus of the course, it would make sense to modify the VAQ questions to elicit more realistic responses that might more closely match what was taught.

Limitations in the methods of assessing and tracking skill acquisition.

Another limitation of the evaluation and assessments used in this program was that skill acquisition of the self-determined behaviours that were the focus of this *Epic Win* program (i.e., listening skills, planning actions, taking actions, problem-solving, goal setting) were not tracked or measured. We depended solely on the pre- and post-course measures to look at progress in acquiring self-determined behaviours. During the course, we did informal follow up on homework completion (i.e., practice of the course skills

during the week). For example, we asked participants whether they used the skills we taught (e.g., writing SMART goals, problem-solving, keeping promises to take specific actions related to goals) between sessions, perhaps practicing with their parents. For the most part, our data collection was anecdotal and incomplete, thus not allowing for any systematic analysis. Throughout the program, participants were completing worksheets for their own reference as they learned and practiced each skill. For example, problem-solving was one of the self-determined behaviours that received a great deal of instruction and practice. In the second half of the course, participants practiced this skill almost each week by filling out a worksheet that would guide them through the problem-solving process. Facilitators would interact with students and hear about the problem, how it was solved and answer any questions; however at no time were these worksheets collected, nor did the facilitators track or score the participants' ability to master this skill. Worksheets could have been collected and copied weekly and would had provided useful information on weekly progress. For example, had we collected their goal setting worksheets each week, investigators could have completed a qualitative analysis on the responses as they progressed through the course.

It would be beneficial for future investigators to support participants' in measuring the actions they take weekly outside the course. Each week we encouraged participants to take at least one action given that taking actions was a critical component in achieving one's' goals; self-awareness alone does not lead to change. Many of the participants did take an action each week, however, this information was loosely tracked and, therefore, insufficient for analysis. To improve future applications of the *Epic Win* program, I recommend that the following three tracking strategies be used. First,

facilitators could photocopy completed homework sheets, giving us weekly examples of performance to compare and analyze over time. Secondly, facilitators would track the weekly number of promised actions actually taken by participants between sessions. Finally, future applications of this program should consider including an MA student observer who tracks the frequency of participant engagement throughout the course. Acts of engagement would include but are not limited too, prosocial behaviours that move the group forward and contribute to the topic of conversation in a positive way (e.g., reflecting back what their peers said, statements of encouragement). Participants' names would be listed along the left side of a data sheet and the indicators of engagement, participation and self-determined behaviours would be listed across the top. Each time a participant would engage in one of these behaviours, the facilitator could check it off, giving the facilitator a frequency count of the self-determined behaviours in which each participant engaged.

Finally, future applications of the *Epic Win* course should place a greater emphasis on making the targeted self-determined behaviours more observable and measureable, and teaching participants how to get and stay in action around their goals. By doing this, the tracking of behaviours would be clearer, participants would be more likely to describe their goals more vividly and facilitators could better understand and support these individuals in achieving their goals. This would also help us to better determine what it was that they learned through the course or where they may have needed extra support and guidance.

Future Research

There are many ways in which the current study has laid the foundation for future research on self-determination with individuals with HFASD and generated suggestions for future research examining the *Epic Win* program specifically. I will now address two key issues that would be important to deal with in future research, (a) maturation over time and it's impact on post-course responses, and (b) social influences outside of the course. These factors will be discussed as to how they might have played a role in the increase in scores on the SDS and in the positive shift in responses on the VAQ. Finally, this section will address the notion that there was also a lack of evidence for causality in the findings for this MA thesis.

Maturation

In this study, the role of maturation could have been a contributing factor to enhanced self-determination as there was a three to six month gap between the pre- and post-course measurements. During this time, it was possible that participants' overall responses could have shifted in a positive direction independent of what they were learning in the course due to environmental and social variables outside the control of the investigators. The investigators did not design the evaluation in a way that could account for the variable of maturation. Wehmeyer and colleagues (2011) discussed that the role of age and maturation in the development of self-determination warrants more explicit examination in future research.

Social Influences

This study did not take into account social variables at play during the course. The influence of others in the participants' support circle who were not involved in the

program may have played a role in promoting self-determination, or shifting responses on the questionnaires. Looking back at Wehmeyer's models of self-determination (Wehmeyer 1999; 2010), there was a large focus on support systems and teaching young people to be leaders on their own teams. In the *Epic Win* course, minimal time was spent on teaching the young adults on how to build their support team. Participants were taught active listening and we explained that if you are a good listener, people are more likely to want to listen to you and support your goals and efforts. However, we did not spend sufficient time supporting participants in taking actions to expand their support teams. Future courses could target expansion of their support team as a goal. One way to do this would be to set a goal early in the program and get into action by identifying appropriate support people and inviting them to assist in the young adult's transition planning during the course.

Having seen positive shifts in the VAQ responses and SDS scores for these three participants, future applications of the *Epic Win* course should consider a research design that will allow for control of extraneous variables such as maturation and social influence. This could be accomplished through involvement of a larger experimental group, which could be compared to a control group that does not receive the *Epic Win* program, but instead receives transition services generically available in high schools and the community.

Conclusion

There are three major contributions that come out of this MA thesis work. First of all, this research was valuable in terms of the concrete recommendations generated for improving the *Epic Win* course, specific to how the course should be delivered and how it

should be evaluated - potentially making it more effective and meaningful for future participants and their families. Secondly, the positive trends that were seen encourage us to continue developing the course to see if these trends would be replicable with larger samples.

Finally, and perhaps most important, there was the shift in perspective for myself, Dr. Ward and the other facilitators with regard to young adults with HFASD who are transitioning into adulthood. These individuals with HFASD already had goals for themselves in these areas of life, and demonstrated that they were self-determined in many ways. This research suggested that young adults with HFASD may represent a distinct group when compared to those individuals typically included in research on self-determination (i.e., those with ID and LD). Our participants began this course with clear ideas about their future, scored moderately high on measures of self-determination, and seemed to possess the foundation for being self-determined. If this new perspective were substantiated through replication with larger samples, future researchers could focus their energy on supporting these youth in acquiring and practicing the skills they need to stay in action, to solve problems and to achieve their goals.

The *Epic Win* course appeared to promote a "growth attitude" in youth who are already moderately self-determined and who had some vision for their future prior to the course. It occurred to me that this course could bring those involved in the program to their "growing edge". To be on your growing edge, was a term I learned from Les McCurdy-Myers, manager of Personal Counselling and Leadership Development Programs at Brock University during my Residence Life Staff training. As a mentor, he taught us to push ourselves out of our comfort zones so as to promote continued learning

and new experiences. From my direct involvement in five deliveries of the *Epic Win* courses and through conducting this analysis of archival data from this course delivery, I saw that developing a growth attitude was possible for young adults with HFASD who took this course and that implementation of the *Epic Win* course improvements identified through this thesis work will increase participants' chances of fulfilling on their transitional goals and creating an *Epic Win* in life.

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Appendix A

Description of Two Models of Self-Determination

A Five-Step Model of Self-Determination (Field & Hoffman, 2006)

Over three years of research, Field and Hoffman (1994) used a process that was first described by Gordon 1977) to develop a model of self-determination. First, the literature was reviewed, and over 1500 student observations and 200 student interviews were conducted. Following that, internal and external expertise was considered as panels of experts reviewed the model. This panel included parents, consumers, educators and adult service providers from three different states. A national review panel of experts also provided input into the development process and oversaw the model as it was developed. Field and Hoffman revised this model in 2006 in order to clarify and highlight three key contributing factors to self-determination (a) understanding the environment in which the individual was trying to express self-determination, (b) establishing and maintaining positive relationships, and (c) focusing of goals that the individual had set. This model looked at internal affective factors and skill components that promote self-determination. There were five major components to this model (Wehmeyer & Field, 2007):

Know yourself and your environment.

This component was important as it described the process that provided the foundation for acting in a self-determined manner. This included: dreaming about the future; knowing one's strengths, weaknesses, needs and preferences; knowing different options, supports and expectations; and finally, deciding what was important.

Value yourself.

Similar to the first component, students learned about valuing themselves, which also provided the foundation for them to engage in self-determined behaviours. Students learned to use their weaknesses to find strengths, accept and value themselves as they were, recognize rights and responsibilities, take care of themselves and develop and foster positive relationships.

Plan.

This component focused on identifying the skills that were required to act on the foundational skills for acting in a self-determined manner. In order to do this, students set their goals, planned small steps to meet their goals, anticipated the results, became creative and then role played the steps to achieve their goals.

Act.

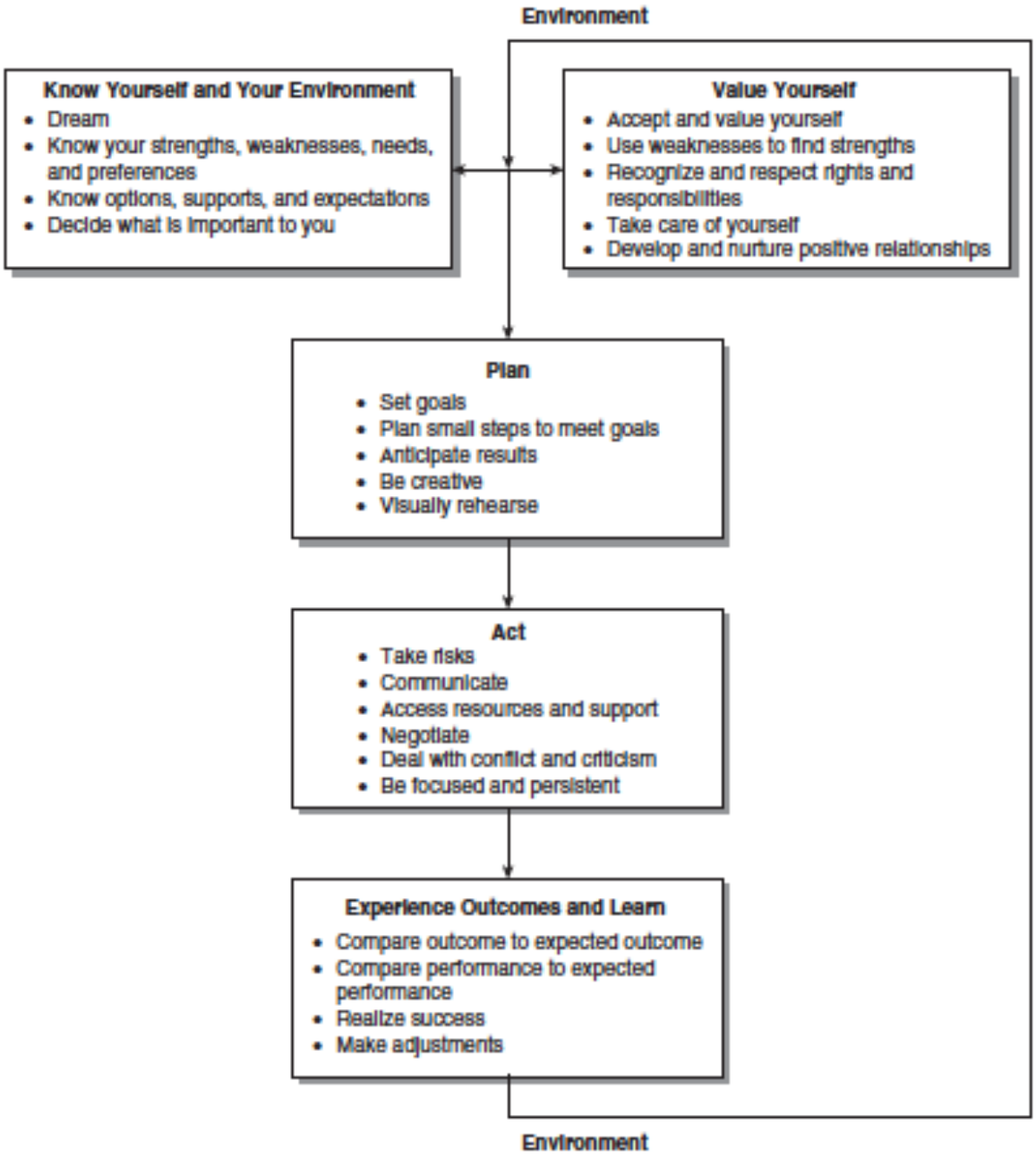
The acting component was similar to the previous component as students identified and began taking action on the foundation. This component of the model had students communicating, accessing their resources and supports, negotiating, taking risks, dealing with any conflict or criticism, and then being focused and persistent.

Experience outcomes and learn.

This component consisted of a time for students to review their efforts to date in becoming self-determined. Students could compare the actual outcomes they experienced with the outcomes and the performance that they expected. This reviewing of skills and the knowledge that contributed to enhancing self-determination helped students to realize and celebrate their successes and then to make any adjustments needed for further progress.

A Five-Step Model of Self-Determination (Field & Hoffman, 2006)

Figure 1.2 Five-Step Model of Self-Determination



SOURCE: Hoffman, A., & Field, S. (2006). *Steps to self-determination* (2nd ed.). Austin, TX: PRO-ED.

Adaptability Instruction Model (Mithaug, Martin, & Agran, 1987; Mithaug, Martin, Agran, & Rusch, 1988)

The Adaptability Instruction Model stemmed from research and theory on self-control. Despite using different terminology in this model, the Adaptability Instruction Model taught many of the same components and skills needed to promote self-determination that are mentioned in the previously reviewed research (such as in Algozzine and colleagues, 2001). The purpose of this model was to teach students with disabilities generic adaptability skills that they could use during their transition from school to their post school settings. The following four skills were the focus of this model and are listed in the sequence that they were taught:

Decision-making.

Students learned how to identify their needs, abilities and interests, then how to consider the alternative decisions they could make, and finally to make the decision on specific goals.

Independent performance.

In this phase, students learned how to follow through on their action plan related to their selected goals. They used self-management or student-directed learning strategies to assist them in performing tasks independently.

Self-evaluation.

Students learned how to monitor and record the performance outcomes of the tasks that are in their plans. Following that, students compared their results with their goals and the performance expectations that they had set during decision-making.

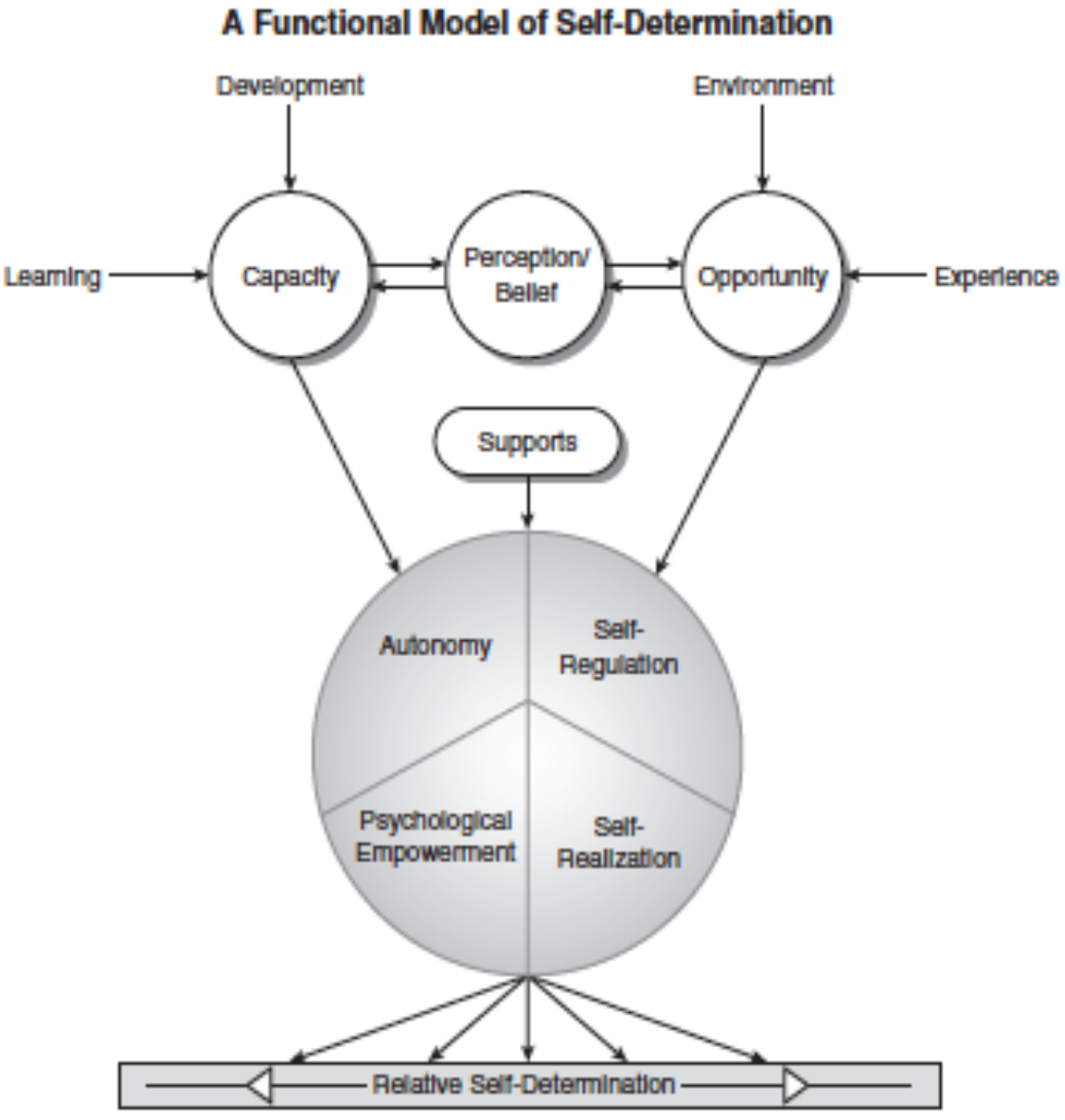
Adjustment skills.

This phase taught students to adjust their goal selection and behaviour by reviewing their feedback from previous decisions and reflect on their past actions. Looking back on what worked for them, students could select goals, actions and decide what would work best for them in the future to help them achieve their goals.

Appendix B

Functional Model of Self-Determination (Wehmeyer, 1999)

Figure 1.1 Wehmeyer's Functional Model of Self-Determination



Appendix C

Wehmeyer's Social Ecological Approach to Promote Self-Determination (2010)

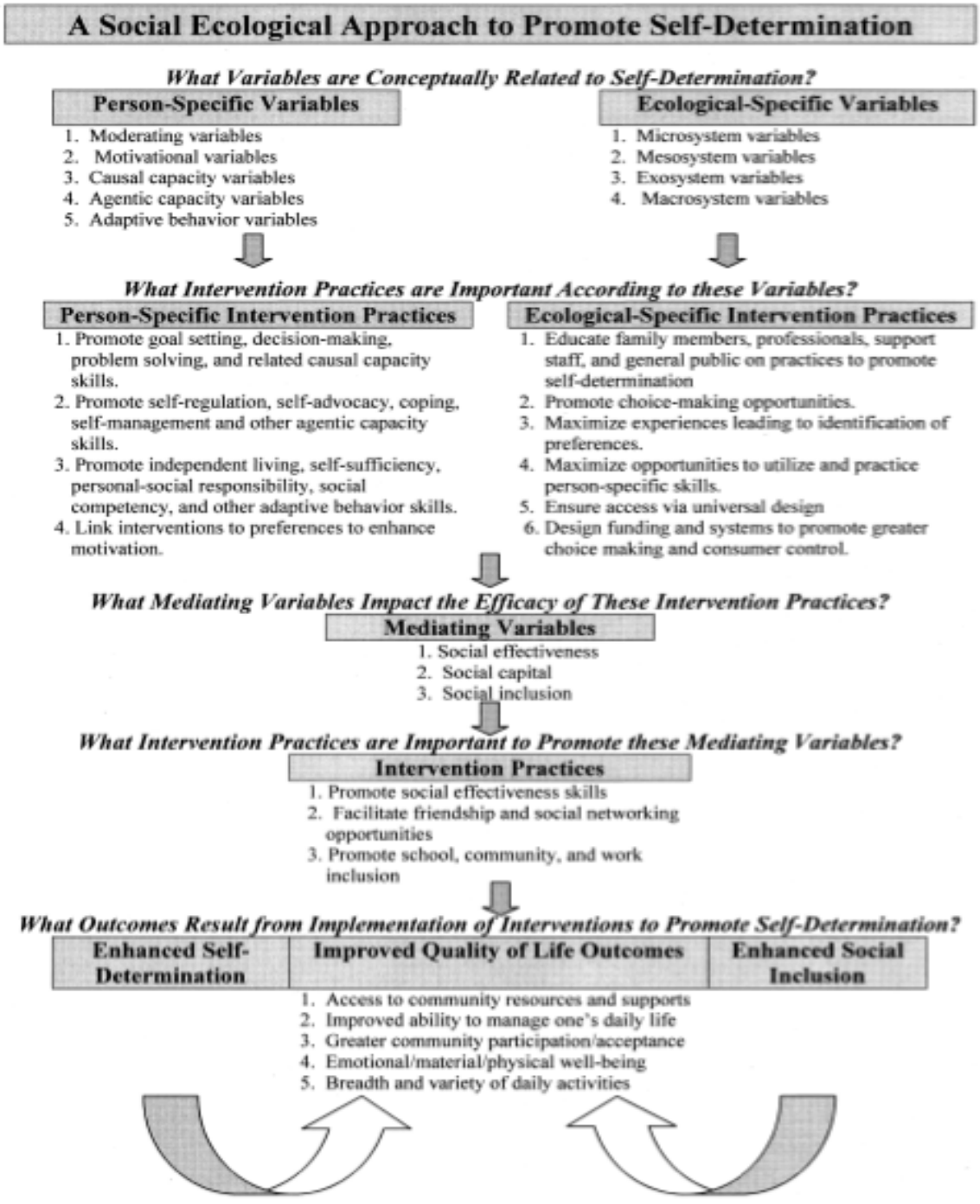


Figure 1. A social ecological approach to promote self-determination.

Appendix D

Description and Comparison of Evidence-Based and Manualized SD Interventions

***The ChoiceMaker Curriculum* (Martin, Marshall, Maxson, & Jerman, 1993)**

Martin and colleagues (1993) received an OSEP sponsored grant to develop materials that could be used to teach essential self-determination skills as a part of their transition education. The curriculum stemming from this grant consisted of three sections: choosing goals (i.e., goals were related to employment, education and personal/ independent living), expressing goals (i.e., active engagement and leadership during IEP meetings), and taking action (i.e., learning how to attain transition goals). Each of these sections consisted of two to four teaching objectives/goals and covered six transition areas that were categorized under educational, employment & personal objectives. The Choosing Goals section explores with the students their personal information and the necessary skills needed to be able to advocate for themselves and articulate their skills, interests, limits and goals. In the Expressing Goals section, there were lessons that taught student leadership skills that they could use to manage their self-directed Individualized Education Program (IEP) meetings. The Taking Action section helped to educate students on how to break down their long-term goals, into more manageable goals that could be accomplished in a week. The materials used in this curriculum were intended for use by students with various disabilities, but to a larger extent, this curriculum had been used for students with learning disabilities, behavioural disorders and mild intellectual disabilities. Prior to 2012, there were four studies that examined the efficacy of the materials from this curriculum (Allen, Smith, Test, Flowers, & Wood, 2001; Cross, Cooke, Wood, & Test, 1999; Snyder, 2002; Snyder & Shapiro, 1997 as cited in Wehmeyer & Webb, 2012). These studies documented positive effects for increases in self-determination, leadership and goal setting skills, as well as positive effects in the student's involvement in their education planning (Wehmeyer & Webb, 2012).

The *NEXT S.T.E.P. Curriculum* (2nd Ed. Halpern, Herr, Doren, & Wolf, 2000)

This curriculum and its materials were designed and evaluated for adolescents aged 14 to 21 across multiple disability categories, as well as for those without disabilities. With a focus on self-determination, the *NEXT S.T.E.P.* (**S**tudent **T**ransition and **E**ducational **P**lanning) curriculum was intended to help students become more motivated and prepared to participate in and take charge of their transition planning by doing three things (a) evaluating their needs during this time, (b) identifying their goals and the actions to help them achieve those goals, and (c) to conduct their transition planning meeting and monitor the implementation of their transition plan. Halpern and colleagues (2000) designed video and print materials for various audiences (e.g., the students, teachers and family members) and a process for tracking the student success. Materials were designed for use in the class by the students and teachers, as well, additional guidelines were also provided for the family members to follow along. Curriculum materials included a teacher's manual, workbooks for the students, and instructional videos. There were also many entertaining and instructional activities that included student and teacher demonstrations, field-related activities, hands-on activities and finally preparation and participation in the transition planning events (Zhang, 2001).

The curriculum consisted of 16, 50-minute lessons divided into four instructional units. Unit 1: Getting started, Unit 2: Self-exploration and Self-Evaluation, Unit 3: Developing Goals and Activities, and Unit 4: Putting a Plan into Place.

Unit 1 introduced the students to the idea of transition planning and got them motivated to participate. Unit 2 was comprised of six lessons that taught students about self-evaluation. Students were learning about their strengths, weaknesses, and interests through a variety of activities. Towards the end of this unit, students completed the Transition Skills Inventory, a 72-item scale that rated students in four transition areas: personal life, jobs, education and training, and living on one's own. Scores from this scale combined with the results of other activities filled out by the individual, the teacher and family members would be used to help direct the remainder of the transition planning process. If the students disagreed with what any of the family members or teachers had suggested, they were encouraged to share their opinions with others and work out any discrepancies before moving forward with the transition planning. Unit 3 included five lessons in which students were able to begin identifying their hopes and dreams based in the four identified transition areas from the Transition Skills Inventory. Students narrowed this down to choose four or five goals that they could focus on and were then able to choose activities that would assist them in pursuing their goals. Finally, Unit 4 consisted of three lessons that prepared students for their transition-planning meeting. Throughout these lessons, students were able to monitor their progress and make any needed changes (Wehmeyer et al., 2013).

Zhang (2001) conducted a study to examine the effect of the *Next S.T.E.P Curriculum* on the self-determination skills of high school students. In this study, 71 grade 9 students participated in the curriculum and completed the Arc's Self-Determination Scale as a pre and post measure. The results indicated that the treatment group had scores that increased significantly more than those of the control group on measures of self-determination. Zhang (2001) summarized the mean total self-determination scores to compare the participants in both groups. It was determined that the average pre-test score for the treatment group was 89.1, which was lower than the control group with a score of 95.2. At post-test, the mean score of the treatment group increased to 98.8, surpassing the post-test mean score of 93.4 achieved by the control group. Further, Zhang (2001) conducted an analysis of covariance (ANCOVA) that revealed the difference between the two groups was statistically significant $F = 5.6$, ($p < .05$).

The Self-Determined Learning Model of Instruction (SDLMI; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000)

The *SDLMI* was an evidence-based practice that could support educators in teaching students who have a disability how to become self-regulated learners. Being a self-regulated learner was said to enhance self-determination, help with the attainment of functional and academic goals and also assisted students in being more engaged in their educational curriculum (Suk-Hyang Lee, Wehmeyer, & Shogren, 2015). Wehmeyer, and colleagues (2000) had argued that there was a critical step missing in the earlier material and methods that teachers were using in an effort to teach their students to be self-determined. They argued that earlier instructional methods and materials focused on teaching students how to set goals, make decisions, solve problems and self-advocate

etc., however, this was accomplished through teacher directed learning. The earlier instructional models did not teach students how to take greater control of their own learning. Based on the premise that individuals who were self-determined were "causal agents" in their own lives, (Wehmeyer, 1996; 1998; Wehmeyer, Agran, & Hughes, 1998 as cited in Wehmeyer et al., 2000), Wehmeyer et al., 2000 suggested that there be a shift from teacher-driven to student-directed instructional models. The *SDLMI* was created with this goal in mind - to provide teacher instruction that truly enabled students to be causal agents in their lives. This model was derived from the Adaptability Instruction Model (Mithaug, Martin, & Agran, 1987; and Mithaug, Martin, Agran, & Rusch, 1988) described above. The *SDLMI* was based on the research in student directed learning and it enabled students to use a problem-solving and goal-oriented strategy while teaching them the component elements of self-determination. The implementation of the *SDLMI* consisted of three instructional phases: Set a goal, Take action, and Adjust goal or plan. There were three objectives to each phase: student questions, teacher objectives and educational supports. In each phase, the student was the primary agent and makes choices, decisions and takes actions. The student responded to a problem in each phase by posing and answering four specific questions. Each question was setup to guide the student through a problem-solving sequence that will also guide them through each of the different phases (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).

More recently, a meta-analysis by Lee, Wehmeyer & Shogren (2015), reviewed 15 single-subject studies that examined the efficacy of using the *SDLMI* as an intervention. The goal of these studies was to increase the access and engagement in the general educational curriculum and to enhance the transition related outcomes for these students. The efficacy of the *SDLMI* was analyzed using the percentage of nonoverlapping data (PND). The results from this analysis supported the notion that the *SDLMI* was effective in promoting functional and academic goal attainment in students with disabilities.

Self-Advocacy Strategy **(Van Reusen, Bos, Schumaker, & Deshler, 2002)**

The *Self-Advocacy Strategy* was designed by Van Reusen et al. (2002) with hopes to teach individuals the skills needed to self-advocate when preparing for and participating in planning meetings surrounding their education or transition into adulthood (Schelling & Rao, 2013). The *Self-Advocacy Strategy* was designed primarily for use with students who have a learning disability, however, it had been used with students who also had behavioural disorders and mild intellectual disabilities. The instruction for this strategy could be delivered through live instruction, or through a combination of live instruction and computer mediated instruction (Schelling & Rao, 2013). Students worked through a series of lessons that focused on seven different instructional stages (Wehmeyer et al., 2013). The first stage, *Orient and Make Commitments*, briefly introduced students to this topic and taught them about how they could participate, increase their student power and take control during this progress. Stage 2, *Describe*, got more detailed about the transition process and explained the educational meetings involved. Students would learn about the advantages they may experience if they participated in this process. An algorithm, "I PLAN" was introduced to help students remember the steps they needed to do to get involved and allowed them a way to identify and monitor their progress. Stage 3, *Model and Prepare*, had the teacher

modelling the steps in I PLAN so the students could see the strategy in action. Students would also complete an inventory, which was the first step and would provide them with information they could use at their conference. In the fourth stage, *Verbal Practice*, students responded to questions to ensure that they knew the steps in the I PLAN strategy, and then they rehearsed the steps verbally. In the fifth stage of this process, *Group Practice and Feedback*, students would have mastered the steps of I PLAN and would participate in a simulated group conference (that was audio and video taped for future reference) where they woulda receive feedback and suggestions from their teachers and the other students. Stage 6, *Individual Practice and Feedback*, gives students the chance to meet with their teachers independently to practice and get feedback until they master the skills. In this stage, the audio or videotape from the previous stage was reviewed. Together, the student and teacher worked to create a self-evaluation of the student's performance. The students took this feedback and participated in another simulated conference that could be used to track improvements and re-evaluate performance. Finally, stage 7, *Generalization*, was organized for students to generalize the I PLAN strategy to actual conferences (Wehmeyer et al., 2013).

The majority of the studies that were currently supporting this curriculum focused exclusively on its effectiveness in increasing the use of self-advocacy skills in IEP meetings. The empirical evidence supporting the use of this strategy in other types of educational meetings was limited (Schelling & Rao, 2013). In fact, Schelling and Rao (2013) identified only one study to support the effectiveness of this strategy being used successfully by individuals with learning disabilities, behavioural disorders and mild emotional disturbances (Test, Fowler, Brewer, & Wood, 2005). There were also two studies that have included students with intellectual disabilities (Cease-Cook, Test, & Scroggins, 2013; Schelling & Rao, 2013). The results from the Cease-Cook et al. (2013) study indicated that five students with an intellectual disability showed positive results in their IEP meetings when they used the *Self-Advocacy Strategy*. Schelling & Rao (2013) evaluated the effectiveness of using the computed mediated version of this instructional strategy to teach self-advocacy skills to six high school students who identified as having an intellectual disability. The students were asked 10 questions verbally from the Conference Question Guide during three baseline and two different conference situations; they scored one point for each relevant response. The results from this study showed that students with an intellectual disability learned and demonstrated the use of a self-advocacy strategy across two informal conference settings and with a special education and a general education teacher. After participating in the study, it was observed that students were able to engage in an in-depth discussion with staff about their learning needs and goals (Schelling & Rao, 2013)

Steps to Self-Determination **(2nd ed.; Field & Hoffman, 2005)**

This curriculum was developed for individuals with and without disabilities who were at the secondary level transitioning into adulthood. Primarily, the materials were designed for students with mild to moderate learning and behaviour difficulties, which included students who had a diagnosis of learning disabilities and mild intellectual disabilities (Wehmeyer et al., 2013). The *Steps to Self-Determination* program consisted of an 18-week instructional program that was based on Field and Hoffman's *Five Step Model of Self-Determination*. The 18 lessons were comprised of instructional methods

that include: modelling, cooperative and experiential learning, lectures and discussions (Wehmeyer et al, 2013). The first week of this program was an hour-long orientation session. Following that, for week two, parents and their young adults were welcomed to participate in a six-hour workshop that had guidelines for including parent involvement, and activities that focus on self-awareness and acceptance. There were also optional homework activities that the families could complete to further their knowledge on self-determination and how to best support their son or daughter in developing the skills necessary for this transition. The remaining 16 weeks encompassed classroom-based lessons that focused on content related to self-determination (i.e., setting and attaining goals, self-advocacy and decision-making). The *Steps to Self-Determination* program included assessment tools, student and teacher objectives, teacher information, preparation guidelines, lesson plans and the master copies of any of the overhead and handouts needed for the programs.

Comparison of Self-Determination Programs

Reviewing each of the 6 interventions, there were notable similarities and differences that make each program unique, and beneficial in it's own way. Programs were compared in four areas (a) the models on which they were based, (b) the populations for which they were primarily designed, (c) the components of self-determination that were targeted in training, and (d) program design and implementation.

Three of the six programs were not specifically or clearly derived from one of the models of self-determination: *The ChoiceMaker Curriculum*, *The NEXT S.T.E.P. Curriculum*, and the *Self-Advocacy Strategy*. Despite not being explicitly based on any one model, these programs did show some similarities to the models. For example, these programs did focus on making choices, decisions and setting goals, educated students on how to take actions around these goals and offered practice for the transition planning meetings in which they may be involved. The other three programs were derived from models as labelled in the comparison chart.

All six programs were delivered to very similar populations. Each program was targeting adolescents and young adults with disabilities. These programs also stated that they were either designed specifically for people with learning disabilities, behavioural disorders and mild intellectual disabilities specifically, or, they stated more generally that the program was designed for individuals with various disabilities. Two programs, *The NEXT S.T.E.P. Curriculum* and the *Steps to Self-Determination* program also stated that they could be used with individuals without disabilities. Further, when looking at the evidence and the research to support, each of the interventions was comprised of participants with a diagnosis of learning disabilities, behavioural disorders, and intellectual disabilities. It was only the *WFA* curriculum that had individuals identified with ASD as participants (even though it was only 5.5% of the population).

Each of the programs included similar components of self-determination; however, each program may have put more emphasis on certain components or skills. The programs focused on having the students learn about their strengths, limitations, interests and what was really important to them. Students developed goals and learned how to break them down to take actions. Another component that was evident in the programs, was problem-solving. Students also learned about skills that could assist them

in being a stronger leader in their own life, and could help them to better represent themselves and self-advocate during transition planning meetings. There was some variability in how the programs taught these skills, and which skills the programs emphasized but the overall goal of creating students who could be causal agents in their own lives was consistent.

Finally, each program was designed with a different number of lessons that were usually divided into a specific number of units or sections. Some programs consisted of 16 lessons and others were longer and consisted of 36 lessons delivered over an academic year. The programs also included different video and print materials and a variety of activities, which could either be presented live or through a combination of computer-mediated and live instruction. One difference in the *SDLMI* and the *Whose Future is it Anyways*? programs was that they both differed from the other programs as they aimed to teach students to be self-determined by using a more student-directed approach.

Appendix E

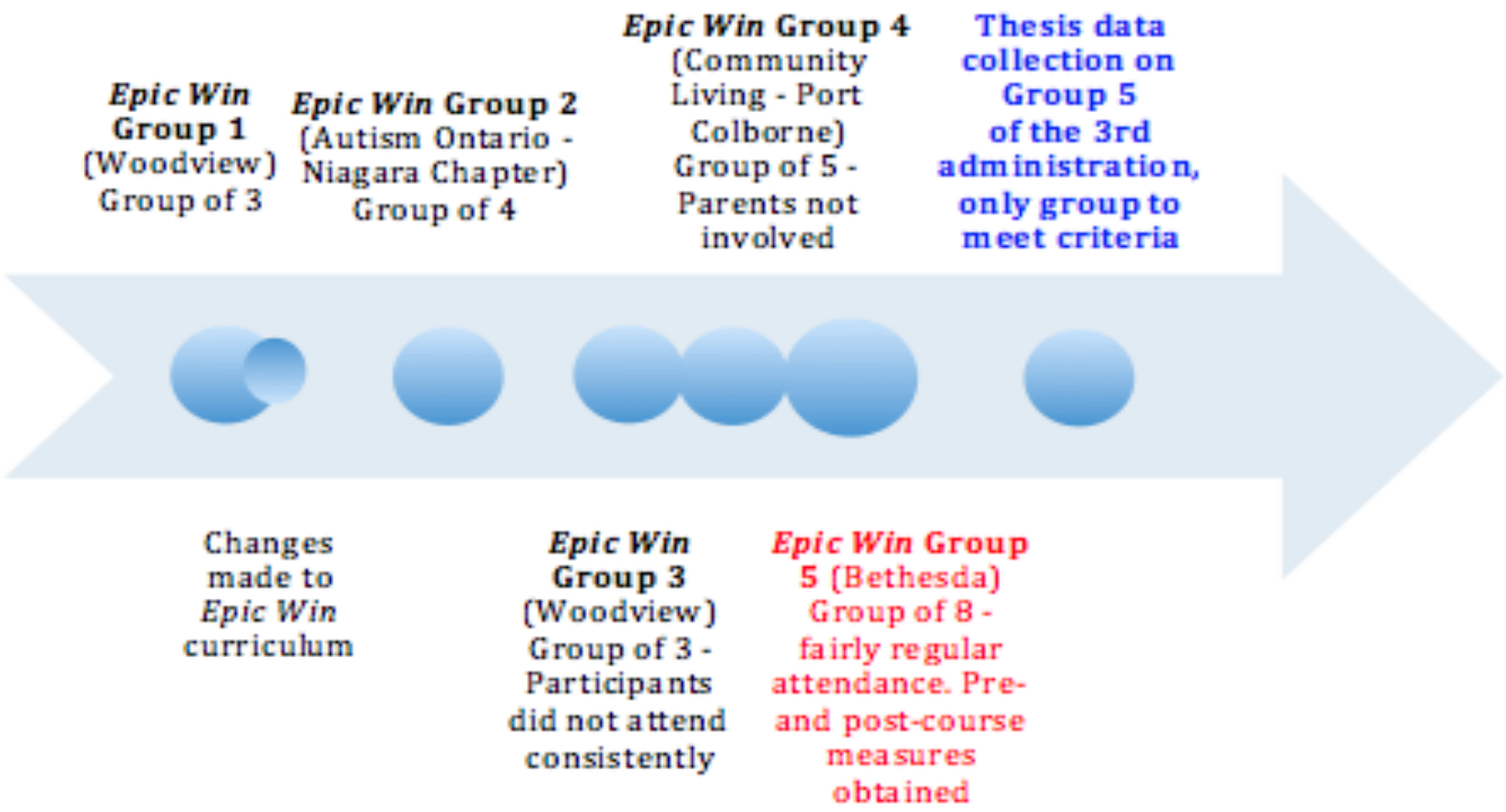
Comparison Chart of Self-Determination Programs

Program (Model)	Population	SD Components	Program Design and Implementation
The ChoiceMaker Curriculum	Students transitioning from high school to adulthood with learning disabilities, behavioural disorders and mild intellectual disabilities	- Learning about their strengths, limits, interests - Students develop goals and break them down to take actions	- Consists of three sections: choosing goals, expressing goals, and taking action. - Each of the three sections has goals and objectives - Covers 6 transition areas
The *NEXT S.T.E.P. Curriculum*	Students transitioning from high school to adulthood with across multiple disability categories and without disabilities	- Learning about their strengths, weaknesses, challenges - The Transition Skills Inventory is used to help develop goals and take actions	- Motivate and prepare students for transition planning - Video and print materials for students, teachers and family members - There is a process for tracking student success - 16, 50 minute lessons divided into four instructional units. Unit 1: Getting started, Unit 2: Self-exploration and Self-Evaluation, Unit 3: Developing Goals and Activities, and Unit 4: Putting a Plan into Place.
The Self-Determined Learning Model of Instruction (The Adaptability Instruction Model)	Students transitioning from high school to adulthood with disabilities	- Problem solving and goal oriented strategies to help teach SD components - In each phase students respond to questions and makes choices, makes decisions and takes actions. - Questions guide students through problem solving sequence	- Supports educators in teaching students with disabilities how to be more SD. - Argued previous models taught students how to set goals, make decisions, solve problems and self-advocate etc., through teacher directed learning. - Switched from teacher-driven to student-directed instruction (based on research in student directed learning). - 3 Phases: Set a goal, Take action, and Adjust goal or plan
Self-Advocacy Strategy	Primarily for students transitioning from high school to adulthood with learning disabilities, but has	- Self-advocacy skills are highlighted in the model. Many components and skills in self-advocacy are	- This program emphasizes on preparing students to self-advocate during their meetings. - Can be delivered through live instruction, or live instruction and computer mediated instruction

	been used for students with behavioural disorders and mild intellectual disabilities	consistent with those in self-determination. However, self-advocacy is what is described as being promoted through this strategy.	- Seven different instructional stages: *Orient and Make Commitments*, *Describe, Model and Prepare*, *Verbal Practice*, *Group Practice and Feedback*, *Individual Practice and Feedback*, *Generalization* - Uses an algorithm, "I PLAN" to help them remember the steps needed to get involved and monitor their progress. - Practice skills at conferences, receive feedback, participate and use this strategy in IEP meetings
Steps to Self-Determination (Five Step Model of Self-Determination)	Students transitioning from high school to adulthood with and without disabilities. Materials were primarily designed for students with learning disabilities, behavioural disorders and mild intellectual disabilities	Setting and attaining goals, self-advocacy and decision making	- Minimal detail provided on the design - 18-week program comprised of an orientation session and a six-hour workshop followed by 16 classroom-based lessons. - Parent involvement is fostered through the workshop and optional homework activities.
Whose Future Is It Anyway? - 2nd Edition (Functional Model of Self-Determination)	Students transitioning from high school to adulthood with various disabilities.	Self and disability awareness, problem solving, identifying and securing community resources, learn about and how to write and set goals and how to track their progress, communication skills to use in small groups, skills to be effective team members, self-advocate	- 36 lessons typically delivered over an academic year with an overall goal of introducing students to the concept and idea of transition planning and enabling them to self-direct instruction. - Six sections: *Getting to Know You*, *Making Decisions*, *How to Get What you Need 101*, *Goals, Objectives and the Future*, *Communicating*, *Thank You, Honorable Chairperson*

Appendix F

Timeline of Epic Win Administrations



Appendix G

Outline of the Epic Win Curriculum

EPIC WIN CURRICULUM OUTLINE

SESSION 1: VISIONING MY FUTURE AS AN EPIC WIN

TEENS/YOUNG ADULTS AND PARENTS TOGETHER (6:30 – 7:00)

OVERVIEW AND RATIONALE FOR PROGRAM

- Discussion of rationale and design of the program
  - What does it mean to have your life be an Epic Win?
  - Show 4-5 min of Jane McGonigal's TED Talk on Epic Win http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world.html
- Summarize McGonigal's main points about Epic Win and how it relates to transitioning to adulthood

- Discussion of key concepts:
  - Inquiry method of learning
  - Group workability and confidentiality http://www.youtube.com/watch?v=RavLjmWdMK4
  - Winning at the Game of Life: Going Gold
  - Transition Planning – What is it? Why is it important?
  - Self-determination – What is it? Why is it important?
  - Self-Advocacy - What is it? Why is it important?
  - Person-centred Planning – What is it? Why is it important?

Discuss format of each session:

1. Introduction to Session Objectives
2. Starting Week 2, review of the homework
3. Inquiry and group discussion
4. Activity to illustrate or practice what we have been discussing
5. Snack
6. More activity to make sure we all get the main points
7. Explain homework (with parents in the room)

TEENS/YOUNG ADULTS SESSION SEPARATE FROM PARENTS

(7:00 – 8:45)

Goals specific to Teens/Young Adults Session 1:

Teens/young adults will begin to get to know each other and to create relatedness and cohesiveness as a group

Participants will identify their Best Self and see the strengths and gifts they have that will empower their transition to adulthood

Participants will feel supported in expressing their hopes and dreams, as well as their concerns, for the future and will see that they are not alone

Activity related to identifying your BEST SELF (7:00 – 7:45)

1. Icebreaker: Introduce yourself and say one thing that you like or love about yourself or share a life experience that was really important to you
2. Ways to look at your Best Self – ask what are your strengths, interests, accomplishments? What are you proud of about yourself?
3. Complete "My Best Self" worksheet
4. Discuss what you see about your Best Self from doing worksheet
5. From My Best Self worksheet, write down the top five characteristics that best describe you now or describe who you aspire to be.

BREAK (7:45 - 8:00)

Visioning your future (8:00 – 8:45)

1. What are your goals or aspirations for the future?
   What areas of life are important to you?
   Show the WHEEL OF LIFE with 4 areas labeled: (1) Further education, (2) Career/Employment, (3) Independence, (4) Relationships.
2. Everyone has their own copy of the Wheel of Life to write on:

a. Identify at least one goal for each area of life that is important to you

b. Share with the group what you have written

3. Picture that you have met all your goals; what does your life look like 5 years from now?
4. What do you think are your parents' goals or aspirations for you and your life? Are they the same/different from yours?
5. If there's time, start to design or create a Vision Board to represent your 5 year plan (e.g., collage, story board, flow chart)

PARENTS SESSION SEPARATE FROM TEENS/YOUNG ADULTS (7:00 – 8:45)

Goals specific to Parents' Session 1

Parents will have the opportunity to express their hopes and concerns around their son's or daughter's future (clearing the space)

Parents will agree to support and engage with their youth outside of this course (by doing homework) to promote their son/daughter's growth in collaboration and social relatedness

Parents will begin to use a positive strength-based approach to support their son or daughter in the transition to adulthood

Activity related to identifying your son or daughter's BEST SELF (7:00 – 7:45)

1. What are your son/daughter's biggest challenges for adulthood?
2. What would your son/daughter say are his/her biggest challenges?
3. What do you like or love about your teen/young adult?
4. What are his/her gifts or strengths that will help in adulthood?
5. Parents complete My Best Self worksheet for themselves and relate their Best Self to what are best characteristics/strengths in their sons/daughters
6. Why emphasize a positive strength-based approach?

BREAK (7:45 - 8:00)

Activity related to Visioning the Future (8:00 – 8:45)

1. What are your long-term aspirations for your child?
2. What are your child's aspirations for him/herself?
3. How are they the same or different?
4. Discuss how to support their son/daughter in completing Vision Board to represent their 5 year plan. Focus on 3-4 areas of life: (1) further education, (2) employment/career, (3) independence, and (4) relationships

WRAP UP TOGETHER (8:45 - 9:00)

Re-cap concepts, answer questions, acknowledge everyone's participation

Hand out binders with worksheets/questionnaires and describe homework

Parents and son/daughter discuss their Best Self

Complete Vision Boards and ask parents to support their sons and daughters in this, but only if help is needed. Encourage them to share their visions with each other

Complete Transition Skills Inventory (questionnaire)

SESSION 2: LIFE CHALLENGES – FACT VS FICTION

Goals of Session 2:

Youth and parents discuss separately their goals and aspirations for their futures (youth by sharing their Vision Boards with 5 year goals)

They separately identify their concerns and fears for the future and see that they are not alone

They learn through role play how to really listen to each other and get each other's hopes, dreams and concerns

Participants discuss the different barriers to fulfilling on their dreams (referred to as "villains" and "opponents")

DISCUSSION QUESTIONS/ACTIVITIES:

1. Share more about your vision for the future (use Vision Board)
2. Clearing the space: We can't move forward in fulfilling on our Visions until we have created a clear space (or clear playing field) upon which we can create.
3. Activity/discussion to clear the space:

(a) What is the gap between where you want to be and where you are right now? (use Wheel of Life worksheet to represent how close/far from goals)
(b) What are your greatest concerns about reaching your goals?
(c) What challenges do you foresee?
(d) What challenges do you think your parents/youth will have?

4. Dealing with "Villians" or "Opponents"

(a) Understanding the limitations and challenges associated with ASD
(b) Disability vs Ability: Stereotypes
(c) Individual differences in learning style
(d) Limiting beliefs from self, parents, society

5. Importance of self-awareness to creating your future

SESSION 3: RESILIENCY AND SEEKING SUPPORT

Facing challenges – importance of failure to building resiliency
Circle of Supports: who is on your team (parents, school teachers and supports, community supports, family and friends).
Building a team – social skills needed for having others want to be on your team.
"Active Listening" – learning to listen and let others know you hear them.

SESSION 4: CAREER/WORK

Goals setting around Career/Work: what are your strengths and possible challenges in the area of getting a job, work skills, keeping employment?
SMARTER goals and action plans
Problem Solving (videotaping): role-playing solutions and discussing best solution

SESSION 5: FURTHER EDUCATION

Goals setting around Further Education: what are your strengths and possible challenges in the area of going to college, university or taking development courses?
SMARTER goals and action plans
Problem Solving (videotaping): role-playing solutions and discussing best solution

SESSION 6: RELATIONSHIPS

Goals setting around Relationships what are your strengths and possible challenges in improving existing relationships, making new friends, keeping friends, romance?
SMARTER goals and action plans
Problem Solving (videotaping): role-playing solutions and discussing best solution

SESSION 7: INDEPENDENCE

Goals setting around Independence what are your strengths and possible challenges in achieving the level of independence you would like?
SMARTER goals and action plans
Problem Solving (videotaping): role-playing solutions and discussing best solution

SESSION 8: PRACTICE AND CONSOLIDATION

Reviewing tools for Goal Setting, SMART goals, Action plans and Problem Solving
Planning Epic Life Plan Video

SESSION 9: CREATING THE EPIC LIFE PLAN VIDEO

Creating Videos (or other visual displays) to represent your Epic Life Plan.
Where to go next: how to generalize what you learned here to future areas of growth and development.

SESSION 10: WRAP UP AND CELEBRATION

Party to celebrate completion of Epic Life Plan and to watch Epic Life Plan videos.

Appendix H

Brock Research Ethics Board Approval

Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE:	8/22/2014		
PRINCIPAL INVESTIGATOR:	WARD, Rebecca - Centre for Applied Disability Studies		
FILE:	14-038 - WARD		
TYPE:	Masters Thesis/Project	STUDENT:	Allison Drake
		SUPERVISOR:	Rebecca Ward

TITLE: My Life as an Epic Win: Self-Determination in Teens and Young Adults with High Functioning Autism Spectrum Disorders.

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW Expiry Date: 8/31/2015

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 8/22/2014 to 8/31/2015.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 8/31/2015. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at http://www.brocku.ca/research/policies-and-forms/research-forms

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Jan Frijters, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.

Appendix I

Subject Selection

Participant	Pre Quantitative	Pre Qualitative	Post Quantitative	Post Qualitative
Sheldon	Full	Full	Full	Full
Robin	Full	Full	Full	Full
Gene	Partial	Full	Full	Full
Participant 4	Full	Full	None	None
Participant 5	Partial	None	Partial	Partial
Participant 6	None	Full	None	Full
Participant 7	None	None	None	None
Participant 8	Full	None	None	None

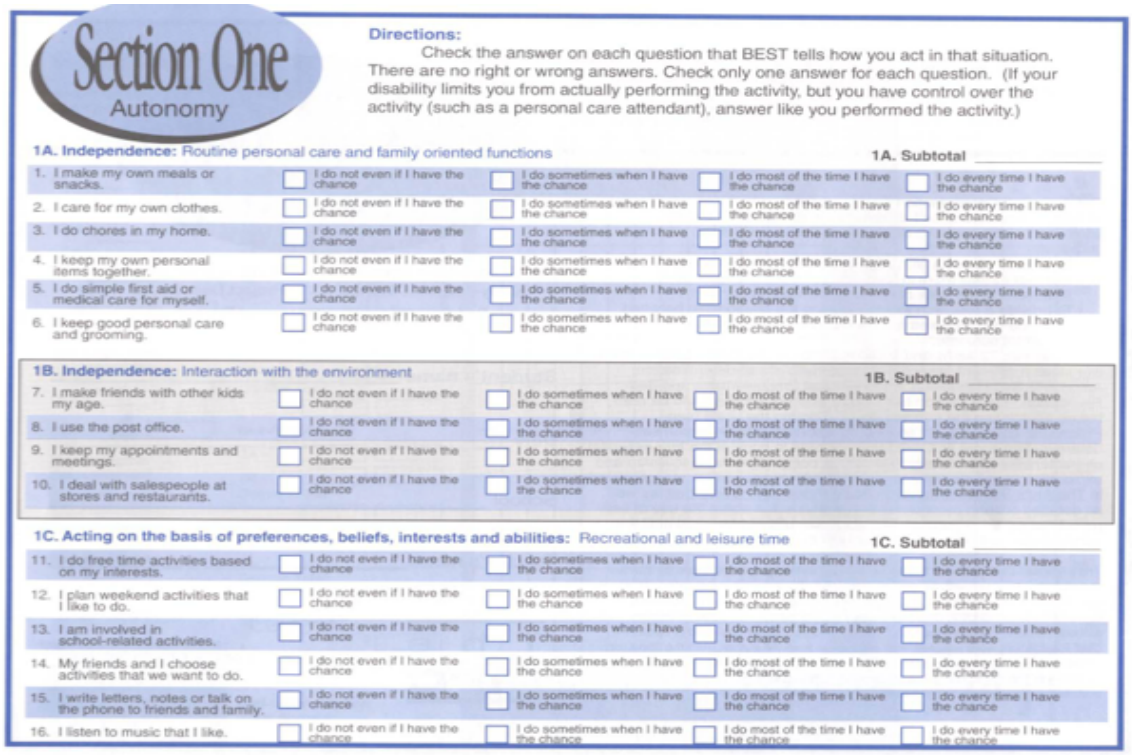
Full = All of the questions were answered in the questionnaire

Partial = Some or most of the questions were answered in the questionnaire

None = No questions were answerer or the participant did not return the questionnaire

Appendix J

The Arc's Self-Determination Scale (SDS)



Section One
Autonomy

Directions:
Check the answer on each question that BEST tells how you act in that situation. There are no right or wrong answers. Check only one answer for each question. (If your disability limits you from actually performing the activity, but you have control over the activity (such as a personal care attendant), answer like you performed the activity.)

1A. Independence: Routine personal care and family oriented functions — **1A. Subtotal** _____

	I do not even if I have the chance	I do sometimes when I have the chance	I do most of the time I have the chance	I do every time I have the chance
1. I make my own meals or snacks.	☐	☐	☐	☐
2. I care for my own clothes.	☐	☐	☐	☐
3. I do chores in my home.	☐	☐	☐	☐
4. I keep my own personal items together.	☐	☐	☐	☐
5. I do simple first aid or medical care for myself.	☐	☐	☐	☐
6. I keep good personal care and grooming.	☐	☐	☐	☐

1B. Independence: Interaction with the environment — **1B. Subtotal** _____

	I do not even if I have the chance	I do sometimes when I have the chance	I do most of the time I have the chance	I do every time I have the chance
7. I make friends with other kids my age.	☐	☐	☐	☐
8. I use the post office.	☐	☐	☐	☐
9. I keep my appointments and meetings.	☐	☐	☐	☐
10. I deal with salespeople at stores and restaurants.	☐	☐	☐	☐

1C. Acting on the basis of preferences, beliefs, interests and abilities: Recreational and leisure time — **1C. Subtotal** _____

	I do not even if I have the chance	I do sometimes when I have the chance	I do most of the time I have the chance	I do every time I have the chance
11. I do free time activities based on my interests.	☐	☐	☐	☐
12. I plan weekend activities that I like to do.	☐	☐	☐	☐
13. I am involved in school-related activities.	☐	☐	☐	☐
14. My friends and I choose activities that we want to do.	☐	☐	☐	☐
15. I write letters, notes or talk on the phone to friends and family.	☐	☐	☐	☐
16. I listen to music that I like.	☐	☐	☐	☐

The Arc's Self-Determination Scale

Adolescent Version

The Arc's Self-Determination Scale (Adolescent Version) is a student self-report measure of self-determination designed for use by adolescents with cognitive disabilities. The scale has two primary purposes:

- To provide students with cognitive disabilities and educators a tool that assists them in identifying student strengths and limitations in the area of self-determination; and
- To provide a research tool to examine the relationship between self-determination and factors that promote/inhibit this important outcome.

The scale has 72 items and is divided into four sections. Each section examines a different essential characteristic of self-determination: Autonomy, Self-Regulation, Psychological Empowerment and Self-Realization. Each section has unique directions that should be read before completing the relevant items. Scoring the scale (see Procedural Guidelines for scoring directions) results in a total self-determination score and subdomain scores in each of the four essential characteristics of self-determination. A comprehensive discussion and exploration of self-determination as an educational outcome is provided in The Arc's Self-Determination Scale Procedural Guidelines, as well as detailed scoring procedures and a discussion about the use of self-report measures in general. The scale **should not be** used until the administrator is thoroughly familiar with these issues.

The Arc's Self-Determination Scale (Adolescent Version) was developed by The Arc National Headquarters with funding from the U. S. Department of Education, Office of Special Education Programs (OSEP), under Cooperative Agreement #H023J20012. Questions used in Section One (Autonomy) were adapted, with permission from the authors, from the Autonomous Functioning Checklist. Questions used in Section 4 (Self-Realization) were adapted, with permission from the author, from the Short form of the Personal Orientation Inventory. Appropriate citations for both instruments are available in The Arc's Self-Determination Scale Procedural Guidelines. The Arc gratefully acknowledges the generosity of these researchers.

By Michael Wehmeyer, Ph.D., Principal Investigator
Kathy Kelchner, M.Ed., Project Director
Self-Determination Assessment Project

Student's name _____

Date _____

School _____

Teacher's name _____

The Arc

1D. Acting on the basis of preferences, beliefs, interests and abilities: Community involvement and interaction — 1D. Subtotal _____

17. I volunteer in things that I am interested in.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
18. I go to restaurants that I like.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
19. I go to movies, concerts, and dances.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
20. I go shopping or spend time at shopping centers or malls.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
21. I take part in youth groups (like 4-H, scouting, church groups)	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance

1E. Acting on the basis of preferences, beliefs, interests and abilities: Post-school directions — 1E. Subtotal _____

22. I do school and free time activities based on my career interests.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
23. I work on school work that will improve my career chances.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
24. I make long-range career plans.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
25. I work or have worked to earn money.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
26. I am in or have been in career or job classes or training.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
27. I have looked into job interests by visiting work sites or talking to people in that job.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance

1F. Acting on the basis of preferences, beliefs, interests and abilities: Personal expression — 1F. Subtotal _____

28. I choose my clothes and the personal items I use every day.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
29. I choose my own hair style.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
30. I choose gifts to give to family and friends.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
31. I decorate my own room.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance
32. I choose how to spend my personal money.	☐ I do not even if I have the chance	☐ I do sometimes when I have the chance	☐ I do most of the time I have the chance	☐ I do every time I have the chance

Please check Section One, A thru F, to make sure there is only one answer for each question.

Section Two
Self-Regulation

Directions:

Each of the following questions tell the beginning of a story and how the story ends. Your job is to tell what happened in the middle of the story, to connect the beginning and the end. Read the beginning and ending for each question, then fill in the BEST answer for the middle of the story. There are no right or wrong answers.

Remember, fill in the one answer that you think BEST completes the story.

2A. Interpersonal cognitive problem-solving

33. **Beginning:** You are sitting in a planning meeting with your parents and teachers. You want to take a class where you can learn to work as a cashier in a store. Your parents want you to take the Family and Child Care class. You can only take one of the classes.

Middle: _____

Ending: The story ends with you taking a vocational class where you will learn to be a cashier.

Story Score _____

34. **Beginning:** You hear a friend talking about a new job opening at the local book store. You love books and want a job. You decide you would like to work at the bookstore.

Middle: _____

Ending: The story ends with you working at the bookstore.

Story Score _____

35. **Beginning:** Your friends are acting like they are mad at you. You are upset about this.

Middle: _____

Ending: The story ends with you and your friends getting along just fine.

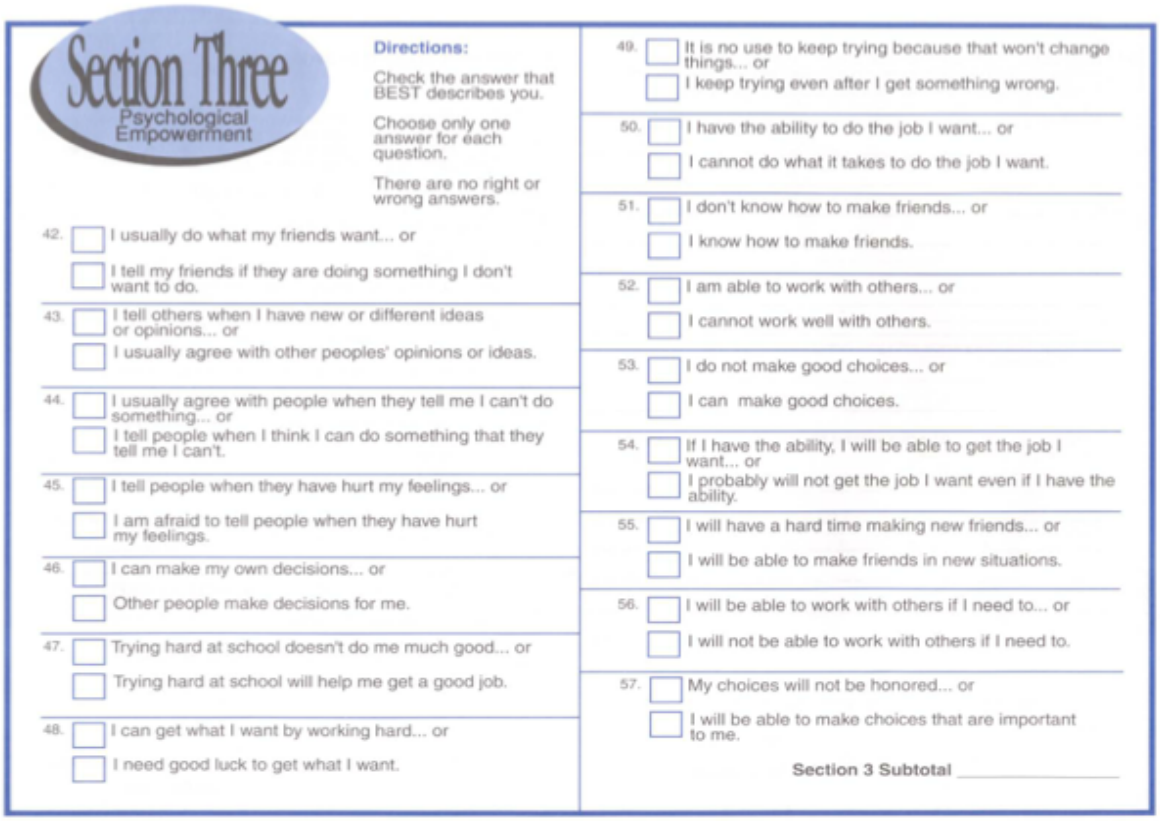
Story Score _____

36. **Beginning:** You go to your English class one morning and discover your English book is not in your backpack. You are upset because you need that book to do your homework.

Middle: _____

Ending: The story ends with you using your English book for homework.

Story Score _____



Section Three
Psychological Empowerment

Directions:

Check the answer that BEST describes you.

Choose only one answer for each question.

There are no right or wrong answers.

42. ☐ I usually do what my friends want... or
☐ I tell my friends if they are doing something I don't want to do.

43. ☐ I tell others when I have new or different ideas or opinions... or
☐ I usually agree with other peoples' opinions or ideas.

44. ☐ I usually agree with people when they tell me I can't do something... or
☐ I tell people when I think I can do something that they tell me I can't.

45. ☐ I tell people when they have hurt my feelings... or
☐ I am afraid to tell people when they have hurt my feelings.

46. ☐ I can make my own decisions... or
☐ Other people make decisions for me.

47. ☐ Trying hard at school doesn't do me much good... or
☐ Trying hard at school will help me get a good job.

48. ☐ I can get what I want by working hard... or
☐ I need good luck to get what I want.

49. ☐ It is no use to keep trying because that won't change things... or
☐ I keep trying even after I get something wrong.

50. ☐ I have the ability to do the job I want... or
☐ I cannot do what it takes to do the job I want.

51. ☐ I don't know how to make friends... or
☐ I know how to make friends.

52. ☐ I am able to work with others... or
☐ I cannot work well with others.

53. ☐ I do not make good choices... or
☐ I can make good choices.

54. ☐ If I have the ability, I will be able to get the job I want... or
☐ I probably will not get the job I want even if I have the ability.

55. ☐ I will have a hard time making new friends... or
☐ I will be able to make friends in new situations.

56. ☐ I will be able to work with others if I need to... or
☐ I will not be able to work with others if I need to.

57. ☐ My choices will not be honored... or
☐ I will be able to make choices that are important to me.

Section 3 Subtotal _____

37. **Beginning:** You are in a club at school. The club advisor announces that the club members will need to elect new officers at the next meeting. You want to be the president of the club.

Middle: _____

_____

_____

_____

_____

_____

_____

_____

Ending: The story ends with you being elected as the club president.

Story Score _____

38. **Beginning:** You are at a new school and you don't know anyone. You want to have friends.

Middle: _____

_____

_____

_____

_____

_____

_____

Ending: The story ends with you having many friends at the new school.

Story Score _____

2A Subtotal _____

2B: Goal setting and task performance

Directions:

The next three questions ask about your plans for the future. Again, there are no right or wrong answers. For each question, tell if you have made plans for that outcome and, if so, what those plans are and how to meet them.

39. Where do you want to live after you graduate?

☐ I have not planned for that yet.

☐ I want to live_____

List four things you should do to meet this goal:

1)_____
2)_____
3)_____
4)_____

40. Where do you want to work after you graduate?

☐ I have not planned for that yet.

☐ I want to work_____

List four things you should do to meet this goal:

1)_____
2)_____
3)_____
4)_____

41. What type of transportation do you plan to use after graduation?

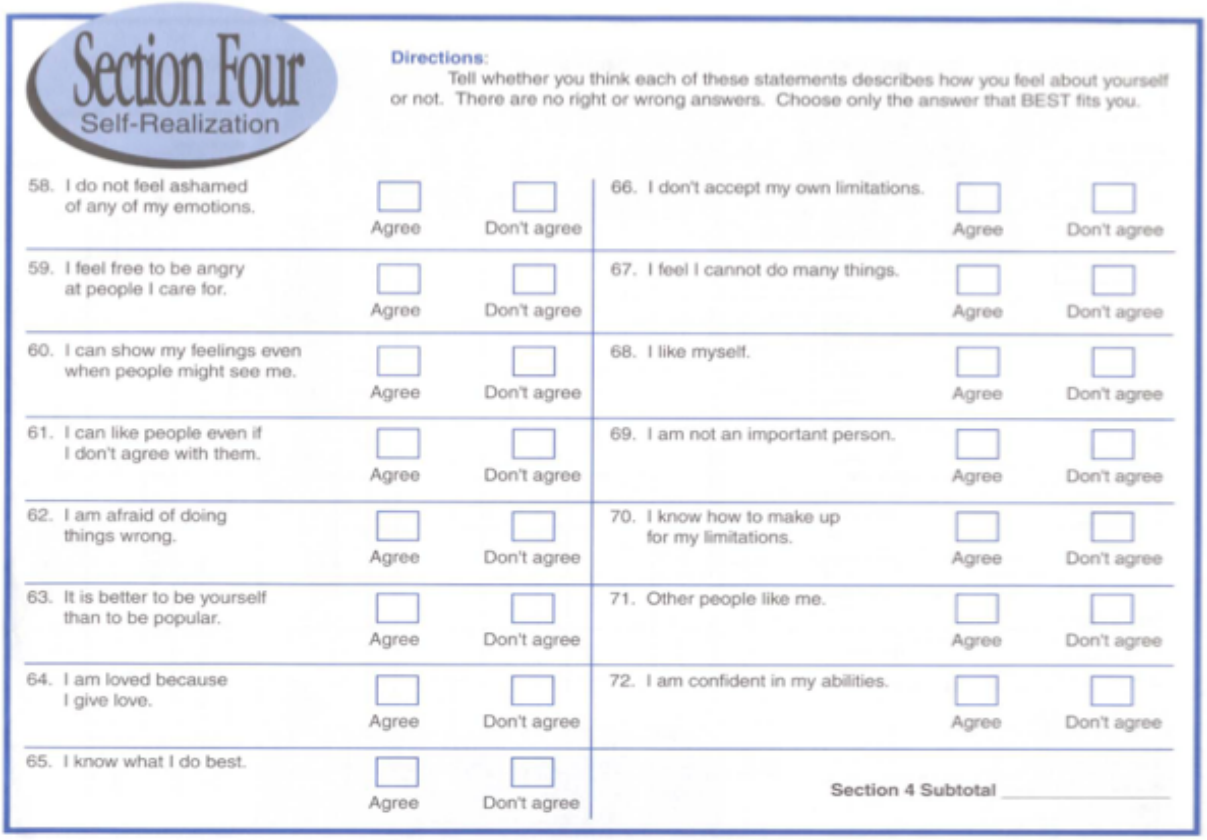
☐ I have not planned for that yet.

☐ I plan to use_____

List four things you should do to meet this goal:

1)_____
2)_____
3)_____
4)_____

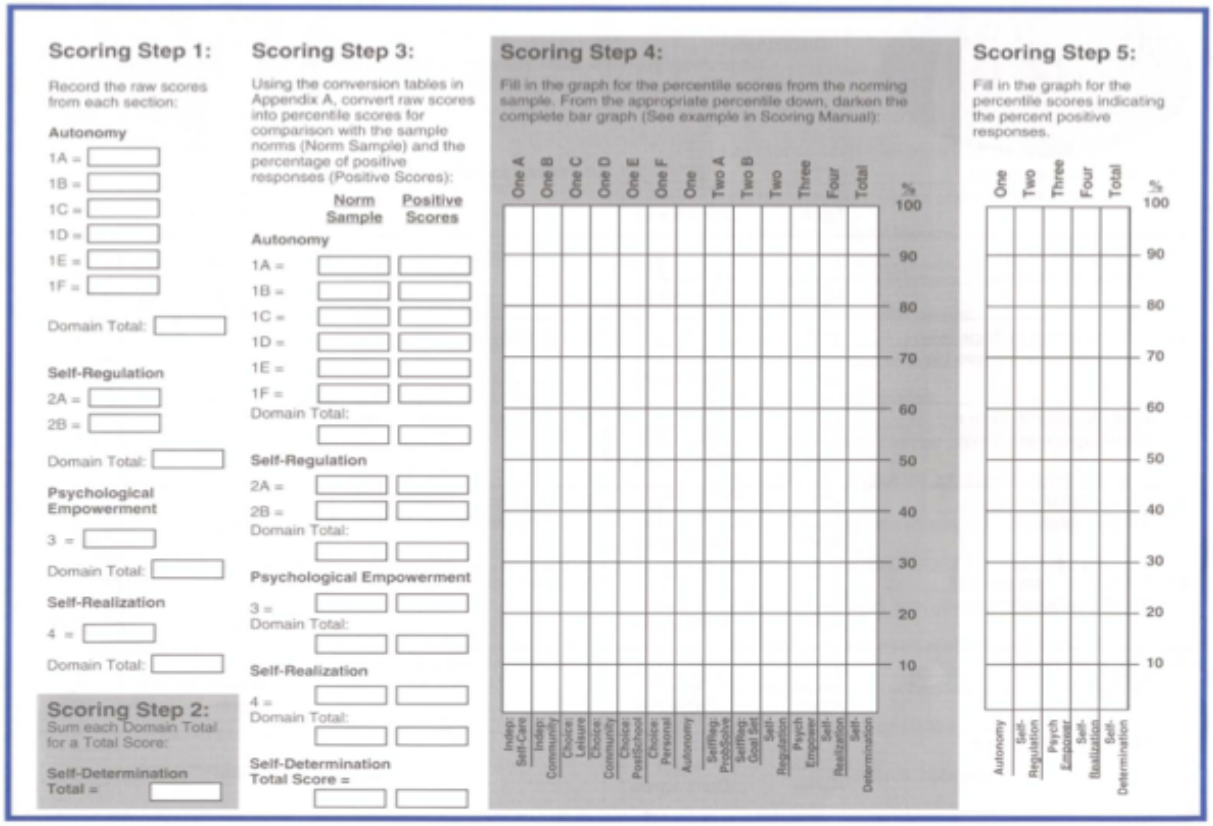
2B Subtotal _____



Section Four
Self-Realization

Directions:
Tell whether you think each of these statements describes how you feel about yourself or not. There are no right or wrong answers. Choose only the answer that BEST fits you.

58.	I do not feel ashamed of any of my emotions.	Agree	Don't agree	66. I don't accept my own limitations.	Agree	Don't agree
59.	I feel free to be angry at people I care for.	Agree	Don't agree	67. I feel I cannot do many things.	Agree	Don't agree
60.	I can show my feelings even when people might see me.	Agree	Don't agree	68. I like myself.	Agree	Don't agree
61.	I can like people even if I don't agree with them.	Agree	Don't agree	69. I am not an important person.	Agree	Don't agree
62.	I am afraid of doing things wrong.	Agree	Don't agree	70. I know how to make up for my limitations.	Agree	Don't agree
63.	It is better to be yourself than to be popular.	Agree	Don't agree	71. Other people like me.	Agree	Don't agree
64.	I am loved because I give love.	Agree	Don't agree	72. I am confident in my abilities.	Agree	Don't agree
65.	I know what I do best.	Agree	Don't agree	**Section 4 Subtotal** _____		



Scoring Step 1:

Record the raw scores from each section:

Autonomy
1A = ☐
1B = ☐
1C = ☐
1D = ☐
1E = ☐
1F = ☐
Domain Total: ☐

Self-Regulation
2A = ☐
2B = ☐
Domain Total: ☐

Psychological Empowerment
3 = ☐
Domain Total: ☐

Self-Realization
4 = ☐
Domain Total: ☐

Scoring Step 2:

Sum each Domain Total for a Total Score:

Self-Determination Total = ☐

Scoring Step 3:

Using the conversion tables in Appendix A, convert raw scores into percentile scores for comparison with the sample norms (Norm Sample) and the percentage of positive responses (Positive Scores):

	Norm Sample	Positive Scores
Autonomy		
1A =	☐	☐
1B =	☐	☐
1C =	☐	☐
1D =	☐	☐
1E =	☐	☐
1F =	☐	☐
Domain Total:	☐	☐
Self-Regulation		
2A =	☐	☐
2B =	☐	☐
Domain Total:	☐	☐
Psychological Empowerment		
3 =	☐	☐
Domain Total:	☐	☐
Self-Realization		
4 =	☐	☐
Domain Total:	☐	☐
Self-Determination Total Score =	☐	☐

Scoring Step 4:

Fill in the graph for the percentile scores from the norming sample. From the appropriate percentile down, darken the complete bar graph (See example in Scoring Manual):

One A · One B · One C · One D · One E · One F · One · Two A · Two B · Two · Three · Four · Total

%: 100 · 90 · 80 · 70 · 60 · 50 · 40 · 30 · 20 · 10

Indep: Self-Care · Indep: Community · Choice: Leisure · Choice: Community · Choice: PostSchool · Choice: Personal · Autonomy · SelfReg: ProbSolve · SelfReg: Goal Set · Self-Regulation · Psych Empower · Self-Realization · Self-Determination

Scoring Step 5:

Fill in the graph for the percentile scores indicating the percent positive responses.

One · Two · Three · Four · Total

%: 100 · 90 · 80 · 70 · 60 · 50 · 40 · 30 · 20 · 10

Autonomy · Self-Regulation · Psych Empowmt. · Self-Realization · Self-Determination

Appendix K

Visioning and Action Questionnaire (VAQ)

My Life as an Epic Win: Visioning and Action Questionnaire

1. What is your vision for each area of your life 5 years from now?

Area of Life	5 Year Goal	Actions Taken (in last month or so)
Career/ Work		
Continuing Education		
Independent Living		
Relationships		

2. Who are the people who will support you in achieving these goals and taking further actions?

3. **Problem solving skills:**

a. What was a problem that you've had in the past month? It can be related to any of the areas of life. Tell me about the problem.

b. How did you handle the problem?

c. Did the problem get solved?

d. If you had to deal with the problem again, would you do the same thing or something different?

4. Self-awareness:

a. Do you have a diagnosis? What does that mean to you?

b. In transitioning to adulthood, what do you see as your strengths?

c. What are some of the challenges that you see for yourself in this transition into adulthood?

d. How do you think your ASD/ Aspergers might impact your transition to adulthood?

e. What about your ASD/Aspergers will be a strength in your transition?

Appendix L

Inter-observer Agreement (IOA) Raw Data

Domain/Subdomain	**Facilitator #1 Raw Score**	**Facilitator #2 Raw Score**	**Agreement (+/-)**
GENE PRE TEST			
Autonomy 1A	11	11	+
Autonomy 1B	8	8	+
Autonomy 1C	13	13	+
Autonomy 1D	8	8	+
Autonomy 1E	9	9	+
Autonomy 1F	10	10	+
Self-Regulation 2A	9	11	-
Self-Regulation 2B	6	6	+
Psychological Empowerment 3	0	0	+
Self-Realization 4	0	0	+
Agreement Total			9/10 **90%**

Domain/Subdomain	Facilitator #1 Raw Score	Facilitator #2 Raw Score	Agreement (+/-)
GENE POST TEST			
Autonomy 1A	12	12	+
Autonomy 1B	7	7	+
Autonomy 1C	14	14	+
Autonomy 1D	10	10	+
Autonomy 1E	14	14	+
Autonomy 1F	11	11	+
Self-Regulation 2A	8	10	-
Self-Regulation 2B	9	9	+
Psychological Empowerment 3	16	16	+
Self-Realization 4	14	14	+
Agreement Total			9/10 **90%**

Domain/Subdomain	Facilitator #1 Raw Score	Facilitator #2 Raw Score	Agreement (+/-)
SHERMAN PRE TEST			
Autonomy 1A	10	10	+
Autonomy 1B	1	1	+
Autonomy 1C	9	9	+
Autonomy 1D	2	2	+
Autonomy 1E	4	4	+
Autonomy 1F	6	6	+
Self-Regulation 2A	8	11	-
Self-Regulation 2B	3	3	+
Psychological Empowerment 3	13	13	+
Self-Realization 4	12	12	+
Agreement Total			9/10 **90%**

Domain/Subdomain	Facilitator #1 Raw Score	Facilitator #2 Raw Score	Agreement (+/-)
SHERMAN POST TEST			
Autonomy 1A	9	9	+
Autonomy 1B	2	2	+
Autonomy 1C	11	11	+
Autonomy 1D	5	5	+
Autonomy 1E	12	12	+
Autonomy 1F	14	14	+
Self-Regulation 2A	10	10	+
Self-Regulation 2B	3	9	-
Psychological Empowerment 3	14	14	+
Self-Realization 4	11	10	-
Agreement Total			8/10 **80%**

Domain/Subdomain	Facilitator #1 Raw Score	Facilitator #2 Raw Score	Agreement (+/-)
ROBIN PRE TEST			
Autonomy 1A	14	14	+
Autonomy 1B	9	9	+
Autonomy 1C	13	13	+
Autonomy 1D	7	7	+
Autonomy 1E	5	5	+
Autonomy 1F	9	9	+
Self-Regulation 2A	8	6	-
Self-Regulation 2B	9	9	+
Psychological Empowerment 3	11	11	+
Self-Realization 4	10	10	+
Agreement Total			9/10 **90%**

Domain/Subdomain	Facilitator #1 Raw Score	Facilitator #2 Raw Score	Agreement (+/-)
ROBIN POST TEST			
Autonomy 1A	13	13	+
Autonomy 1B	7	7	+
Autonomy 1C	10	10	+
Autonomy 1D	5	5	+
Autonomy 1E	17	17	+
Autonomy 1F	8	8	+
Self-Regulation 2A	9	9	+
Self-Regulation 2B	9	9	+
Psychological Empowerment 3	13	13	+
Self-Realization 4	11	11	+
Agreement Total			10/10 **100%**